

THE COMMERCIAL CAR JOURNAL ^{Mc}

A Chilton Class Journal Publication
SEPTEMBER 1927



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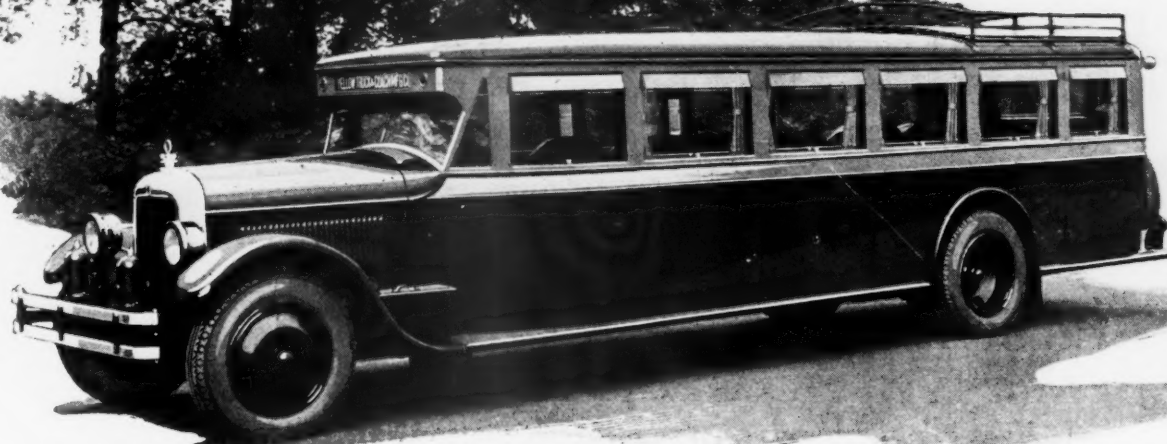
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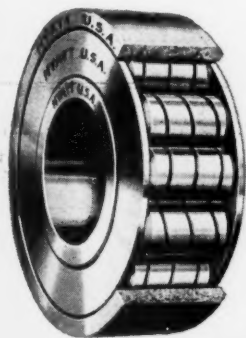
In designing this most modern transportation unit, Yellow Coach engineers decided that unusual stress

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and WHITE BUSES

THE COMMERCIAL CAR JOURNAL

Entered as second-class matter at the Post Office at Philadelphia, Pa.,
under the act of March 3, 1879.

Vol. XXXIV Philadelphia, Sept. 20, 1927 No. 1

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Published the 20th of each month by

CHILTON CLASS JOURNAL COMPANY

Chestnut and 56th Streets, Philadelphia, U. S. A.

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Owned by United Publishers Corporation, 239 West 39th Street, New York;
ANDREW C. PEARSON, chairman, Board of Directors; FRITZ J. FRANK, President; C. A. MUSSELMAN, Vice-President; F. C. STEVENS, Treasurer; H. J. REDFIELD, Secretary.

SUBSCRIPTION RATES

United States and Possessions	\$2.00
Canada	3.00
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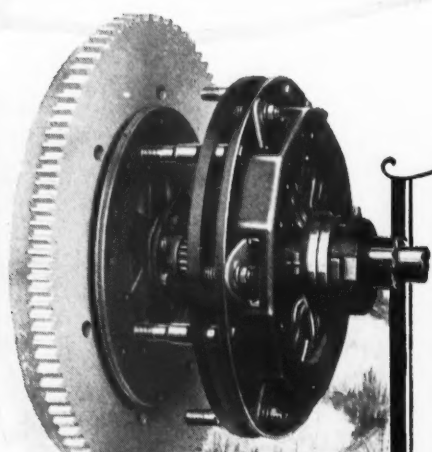
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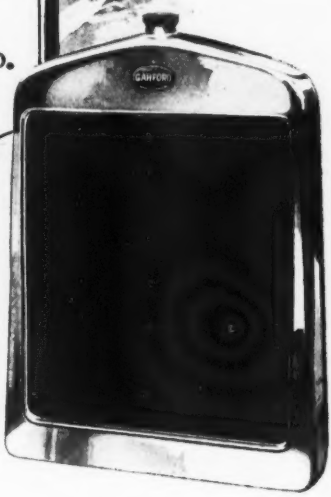
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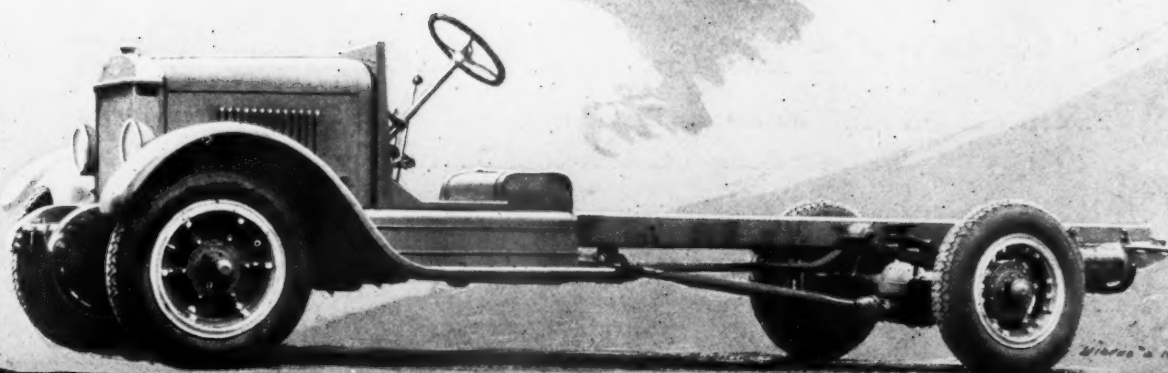
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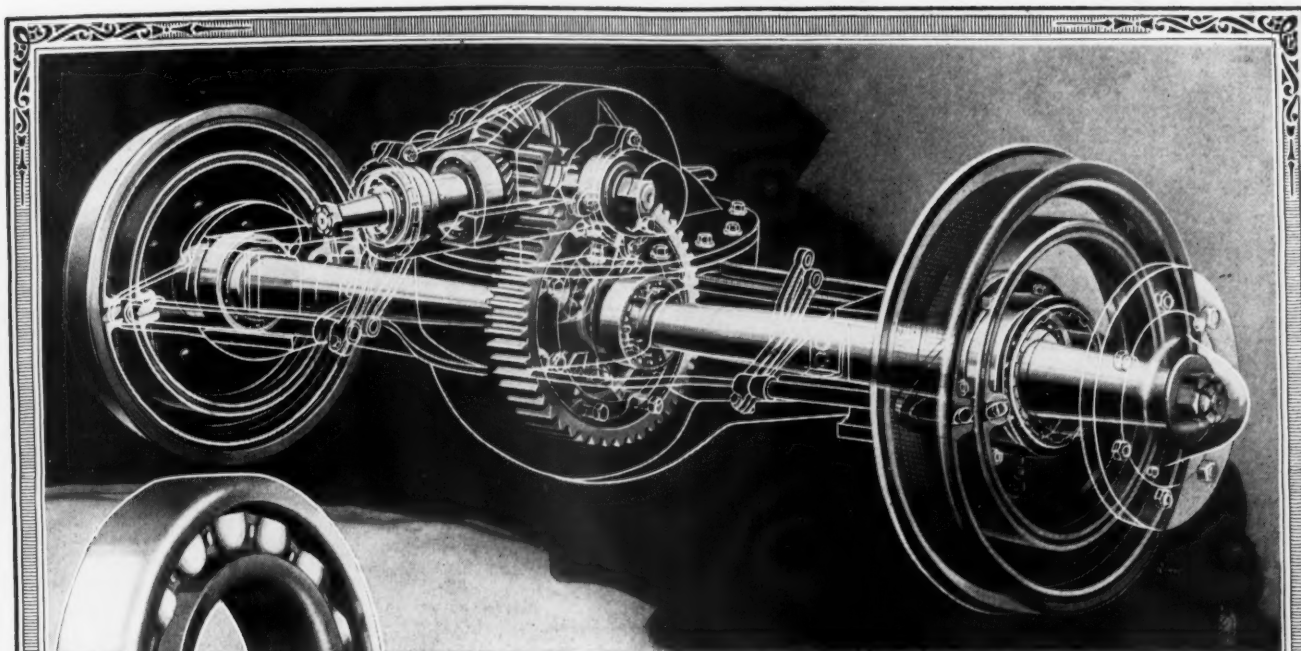
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64 makes, or 185 models of trucks and buses use ball bearing rear axles. 23 of the better known makes of passenger cars are using ball bearing pinions, and at least five in the finer car field have *changed* to ball bearings in the last two years.

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Douglas
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THE NEW DEPARTURE MANUFACTURING CO.
Detroit BRISTOL, CONNECTICUT Chicago

New Departure Quality Ball Bearings

The Conquest of Peru—

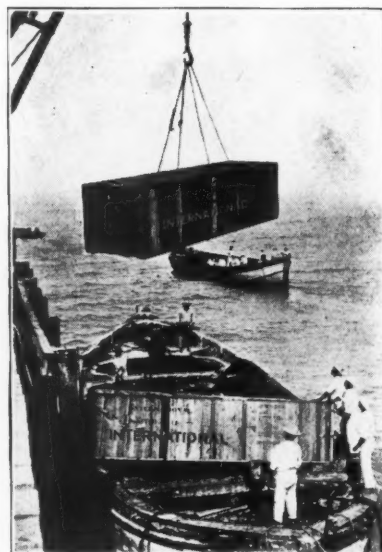
INTERNATIONAL TRUCKS

*Have a Hand in This as in Constructive
Work the World Over*

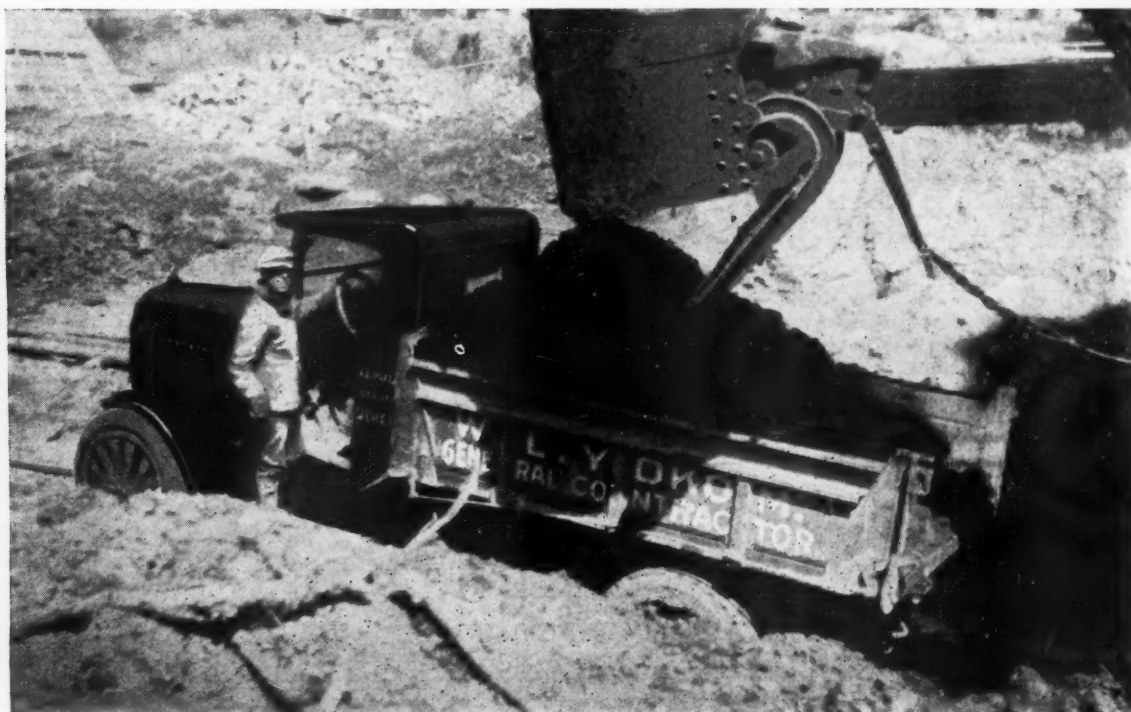
INTERNATIONAL TRUCKS of International Harvester manufacture, have become a tremendous factor in motor transportation. Note the frequency of Internationals in any city's truck traffic, in Speed Truck and Heavy-Duty operation.

The International Truck line now includes the ¾-ton "Special Delivery"; 4 and 6-cylinder Speed Trucks, 1¼, 1½ and 2-ton; and Heavy-Duty Trucks to 5-ton, chain and double-reduction, gear drive. Sold and serviced through 136 Company-owned branches in the United States. For detailed information write the Chicago address.

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THE Peruvian Government is using a fleet of 54 International Trucks in construction work on the great Olmus Irrigation Project. Five sizes are at work, the largest truck order ever placed in Peru. The illustration shows trucks being transferred from steamer Essequibo to a lighter.



The Commercial Car Journal

VOLUME XXXIV

PHILADELPHIA, SEPTEMBER 20, 1927

NUMBER 1

Automotive Exhibits *Will* Feature A. E. R. A. Show

*Motor Bus Transportation Also Has Important Place on
Program for Convention Sessions*

THE exhibit of bus chassis and bodies, parts, accessories and maintenance equipment at the annual exhibit of the American Electric Railway Association to be held in Cleveland, Oct. 1-7, promises to be the most interesting and comprehensive ever held. In addition, the program for the convention, which will be held while the show is in progress, is replete with topics of timely interest and touching practically every phase of motor coach transportation.

The exhibit presents an opportunity to see at one time and in a way that facilitates comparison, the latest developments in the design of buses and allied equipment and the newest productions of the maintenance equipment manufacturers. The educational value of such a display can hardly be overestimated, as in no other way can so complete and up-to-date a picture be obtained of what is being accomplished to improve motor coach transportation and reduce its cost.

Attendance of bus operators at this year's event undoubtedly will exceed any previous record not only because of the increasing number of electric railways using buses but also because the A.E.R.A., through the Bus Division of the American Automobile Association, has extended a general invitation to all bus operators to attend both the exhibition and the convention sessions.

Although the convention is primarily one of electric railway men, bus operation and maintenance occupy a major position on the program. It is easy to understand why this should be, however, when it is appreciated that the electric railways operate over 7000 buses, or about one-sixth of all those engaged in com-

mon carrier service. The bus has become an essential tool of the passenger transportation business and each year its importance in railway operations grows greater.

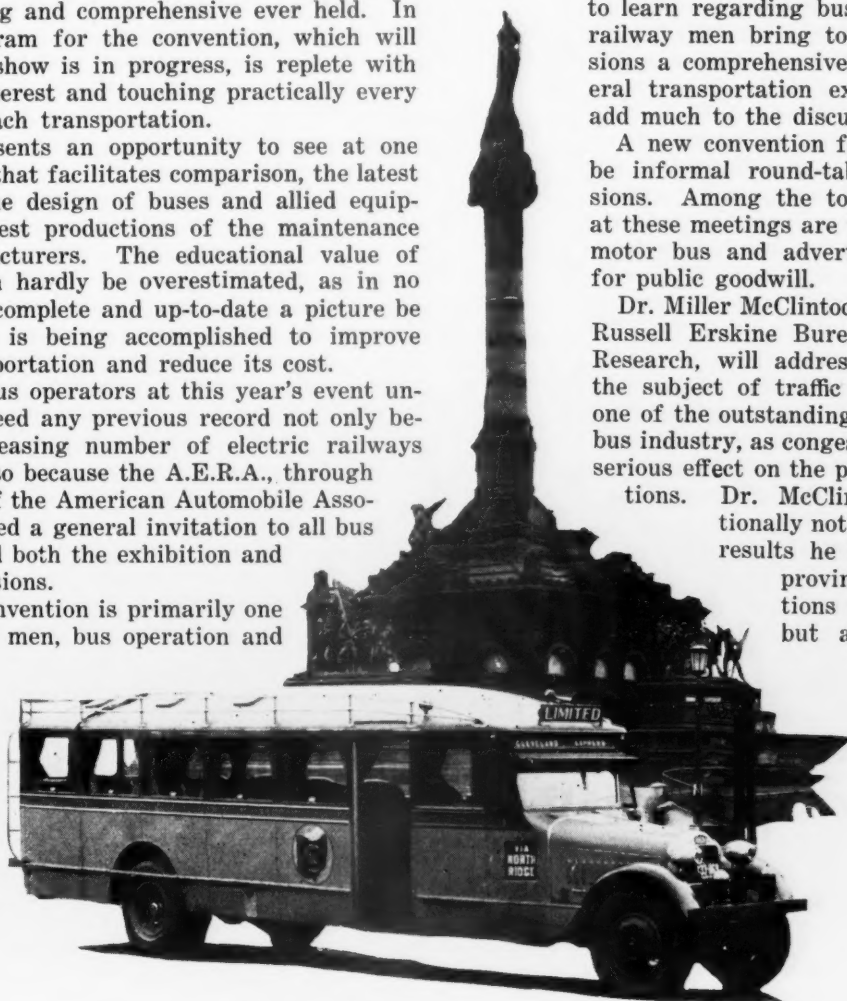
While all classes of operators have much to learn regarding bus transportation, the railway men bring to the convention sessions a comprehensive background of general transportation experience which will add much to the discussions.

A new convention feature this year will be informal round-table luncheon discussions. Among the topics to be discussed at these meetings are traffic regulation, the motor bus and advertising for fares and for public goodwill.

Dr. Miller McClintock, head of the Albert Russell Erskine Bureau of Street Traffic Research, will address the convention on the subject of traffic regulation. This is one of the outstanding problems facing the bus industry, as congestion is having a very serious effect on the profits of many operations. Dr. McClintock is known na-

tionally not only for the practical results he has obtained in improving the traffic conditions in many large cities but also because of the soundness of his view on this important subject. At subsequent sessions, traffic and safety, uniform traffic regulations and the handling of claims arising out of accidents will be considered in detail.

Another topic of current inter-



Soldier's Monument, Cleveland, the A. E. R. A. Convention City

est which will be handled by a man of wide experience is that of commission regulation, which will be discussed by William W. Potter, Attorney - General of Michigan and formerly a member of the Public Service Commission of that state. The effect of governmental regulation on accounting practice also will be studied as will other phases of transportation accounting.

Other topics of major importance to be taken up at the convention are trends in motor bus design, bonus and safety

award systems, terminal and garage design, and the instruction of bus operators, the last subject to be illustrated by a demonstration of the operators' school of the Northern Ohio Power & Light Co. In addition, committees appointed to study bus operation and accounting will report on the results of their work.

Some of the high spots of the convention program have been touched upon here. A large number of additional subjects will be taken up at the different sessions, all bearing on the use of the motor bus. Moreover, one of the chief values of any convention is the opportunity

Automotive Exhibitors at the A. E. R. A. Show

Adams & Westlake Co.	Erie Malleable Iron Co., Van	North East Electric Co.
Ahlberg Bearing Co.	Metal Wheel Div.	Ohmer Fare Register Co.
Aluminum Co. of America	Federal Mogul Corp.	Oil Jack Co., Inc.
American Brake Materials Corp.	Ferodo & Asbestos, Inc.	Operation & Maintenance
American Car & Foundry	Fitzjohn Mfg. Co.	N. A. Petry Co., Inc.
Motors Co.	J. B. Ford Co.	Pneumatic Scale Corp.
American Crucible Products Co.	Fuller & Sons Mfg. Co.	Protex Glass Co.
American Hammered Piston	General Carbonic Company	Pyrene Mfg. Co.
Ring Co.	General Electric Co.	Radel Leather Mfg. Co.
Appleton Electric Co.	General Metals Co., Inc.	Reo Motor Car Co.
Art Rattan Works	Glidden Co.	H. H. Robertson Co.
Baker-Raulang Co.	Globe Ticket Co.	Rollway Bearing Co., Inc.
Bender Body Co.	Graham Brothers	Ross Gear & Tool Co.
Bendix Brake Co.	Graham Motors, Inc.	Russell Mfg. Co.
Bethlehem Steel Co.	Guide Motor Lamp Mfg. Co.	SKF Industries, Inc.
Black & Decker Mfg. Co.	Hale & Kilburn	Safety Equipment Service Co.
Blackhawk Mfg. Co.	Haskelite Mfg. Corp.	Sattley Co.
Bonney Forge & Tool Works	Hercules Motors Corp.	George W. Saums Co.
Robert Bosch Magneto Co.	Heywood Wakefield Co.	Six-Wheel Co.
S. F. Bowser & Co., Inc.	Houde Engineering Corp.	Skinner Automotive Device Co.,
Bragg-Kliesrath Corp.	Hunt-Spiller Mfg. Corp.	Inc.
J. G. Brill Co.	Hyatt Roller Bearing Co.	Peter Smith Heater Co.
Brown-Lipe Gear Co.	Illinois Motive Equipment Co.	Snap-On Wrench Co.
Buda Co.	International Harvester Co. of	Splitdorf Electrical Co.
Budd Wheel Co.	America	Standard-Johnson Co.
Bus Age	International Register Co.	Steel Wheels, Inc.
Bus Transportation	Invincible Vacuum Cleaner Mfg.	Stevens Walden-Worcester, Inc.
C. G. Spring & Bumper Co.	Co.	Studebaker Corp. of America
Carborundum Co.	Johnson Fare Box Co.	Templeton, Kenly & Co., Ltd.
L. C. Chase & Co.	Johnston & Jennings Co.	Texas Co.
Chilton Class Journal Co.	R. F. Johnston Paint Co.	Tickometer Co.
Christensen Air Brake Co.	Kelton-Aurand Mfg. Co.	Timken-Detroit Axle Co.
Clark Equipment Co.	S. Karpen & Bros.	Timken Roller Bearing Co.
Cleveland Fare Box Co.	Lang Body Co.	Titeflex Metal Hose Co.
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ing Co.	Corp.	Van Norman Machine Tool Co.
Continental Motors Corp.	Manley Mfg. Co.	Vichek Tool Company
Dayton Steel Foundry Co.	Massachusetts Mohair Plush Co.	Wadell Engineering Co.
De Laval Separator Co.	Massillon Steel Casting Co.	Walker Mfg. Co.
De Vilbiss Company	Money-Meters, Inc.	J. D. Wallace & Co.
Joseph Dixon Crucible Co.	Morrison Jack Co.	Walter Motor Truck Co.
Dot Lubrication Division	Motor Products Corp.	Waugh Equipment Co.
Duff Mfg. Co.	Motor Wheel Corp.	Waukesha Motor Co.
Eagle-Ottawa Leather Co.	Murray Corp. of America	Weaver Mfg. Co.
Eaton Axle & Spring Co.	National Carbon Co., Inc.	Westinghouse Companies
Eberhard Mfg. Co.	National Cash Register Co.	Wilkening Mfg. Co.
Economy Electric Devices Co.	National Pneumatic Co.	Wheel Truing Brake Shoe Co.
O. M. Edwards Co., Inc.	National Railway Appliance Co.	White Co.
Egyptian Lacquer Mfg. Co.	New Departure Mfg. Co.	C. H. Will Motors Corp.
Eisemann Magneto Corp.	Nichols-Lintern Co.	Willard Storage Battery Co.
Electric Service Supplies Co.	Norma Hoffmann Bearings Corp.	Yellow Truck & Coach Mfg. Co.
Electric Storage Battery Co.		Zenith-Detroit Corp.
Elite Mfg. Co.		

it offers for informal discussions of mutual problems. Then too, the fact that such a large number of manufacturers will be represented at the exhibit, gives operators attending a good chance to discuss their mechanical problems with factory men.

Equipment designed to improve the quality and reduce the cost of maintenance will be one of the outstanding features of the exhibition. Development in this field is going on very rapidly at the present time and great progress is being made by the manu-

facturers of shop equipment in improving their products. Inasmuch as maintenance is one of the major elements of the cost of bus operation, this phase of the exhibit is of great importance.

Among the bus manufacturers who will exhibit are A.C.F., Graham Brothers, Gramm, International Harvester, Mack, Reo, Six-Wheel, Studebaker, Twin-Coach, White, Wills and Yellow. A complete list of exhibitors showing products having an automotive application is given in the box on this page. The latter generally will be located in the auditorium.



Ample facilities are afforded in Cleveland's Auditorium, court and annex to accommodate the large list of exhibitors scheduled for the 1927 A. E. R. A. show

Stability Marks 1927 Bus Growth

*Trend Toward Consolidation and Coordination Large Factors in
Erection of Many Union Bus Terminals
Throughout the Country*

By Edward F. Loomis*

INCREASING consolidations of bus operating companies, resulting in improved organization and operation and greater financial stability, have been an outstanding feature of developments in the motor bus field since the first of the year, along with rapid increase in the number of modern bus terminals.

This tendency toward consolidation is steadily welding bus lines which in the early days of the industry were locally financed and operated, and of minor importance in the transportation field into strong and widely extended systems.

One of the largest recent consolidations is represented by the Motor Transit Corporation, a \$10,000,000 holding company, which through the purchase of companies in the Middle West in the last few months now controls four intercity lines operating over 1500 miles of highway in five states.

The Pickwick Stages, which has had phenomenal success in operating de luxe buses through all of the West Coast States and into Texas, is now planning to extend its operations from its Los Angeles terminal to St. Louis, Mo., within the next 60 days, and eventually to the Atlantic Seaboard. Extensive operations through the Southwest are to be carried on by the Rocky Mountain Stages, a company recently organized by Charles F. Wren, President of the Pickwick Stages Corporation.

There have been some reports that the Pickwick system is contemplating a merger with the Motor Transit Corporation which is operating throughout the Middle West. These stories, while still lacking confirmation, give an indication of the immense possibilities in the movement toward consolidations.

Another outstanding development in the direction of better accommodation for bus patrons and of the establishment of the industry on a sounder and more mature foundation, is the movement for union bus terminals in various important cities. The new \$800,000 union bus terminal being built in Chicago has been largely made possible by the consolidations effected in that territory and is indicative of what can be expected in terminal construction through consolidations in general.

Plans are being discussed in Providence, R. I., for the erection of a union bus terminal that may accommodate the buses of the United Electric Railways Company of Providence, and of the New England Transportation Com-

In this article, prepared especially for *Commercial Car Journal*, Mr. Loomis gives a resume of the outstanding bus developments of the year.

He shows the effect of consolidation, municipal legislation and better patron service upon terminal growth.

He calls attention to the many electric and steam railway companies entering the bus operating field to supplement or replace rail service.

This outline will give students of the industry a brief and interesting picture of bus development.

pany, subsidiary of the New Haven Railroad, as well as vehicles of numerous bus companies now maintaining separate terminals.

Under pressure from the Police Commissioner of New York City, who found that the hundreds of buses which operate between midtown New York and its various suburbs were impeding traffic by parking in the streets, four union bus terminals have either been built or are now being built to accommodate these buses.

The largest New York terminal for use of suburban buses is now being built in the rear of the Capitol Theatre. This structure is planned to accommodate 700 buses a day on a 15-minute schedule, and so that 12 buses can be kept waiting in the terminal at one time.

The building and equipment of these terminals promises to bring about considerable improvement in the conditions under which bus lines were operated from New York. Prospective passengers on these lines will know where to find their buses or to get information as to where they might find the one they should take. Improvement in traffic conditions also is expected to be considerable.

Similar action to have intercity buses entering Detroit prohibited from parking in the streets of that city is contemplated by the Detroit City Council. That body plans to have all intercity buses removed from the streets within the one-mile limit and will order them to secure union terminals in both the east and west ends of the city.

Another terminal project which is indicative of the trend toward unification is that of the Philadelphia Rapid Transit Company which operates buses as well as surface and subway lines and taxicabs. This company plans a large waiting room for both bus and subway passengers, and ticket offices will be provided at which tickets for all P.R.T. bus lines will be sold.

A new type of bus and electric railway coordination was started in July when a high-speed train and bus service was established between Chicago and Detroit. This line, known as "Golden-Arrow," is operated by the Shore Line Motor Coach Company in conjunction with the Chicago South Shore and South Bend Railroad. The Chicago Surface Lines and numerous other electric railway companies have been adding buses to be operated in conjunction with their street cars since the first of the year. According to the latest census taken by the American Electric Railway Association, on April 1, 1927, there were a total of 372

(Turn to page 32, please)

* Secretary, National Motor Truck Committee, National Automobile Chamber of Commerce.

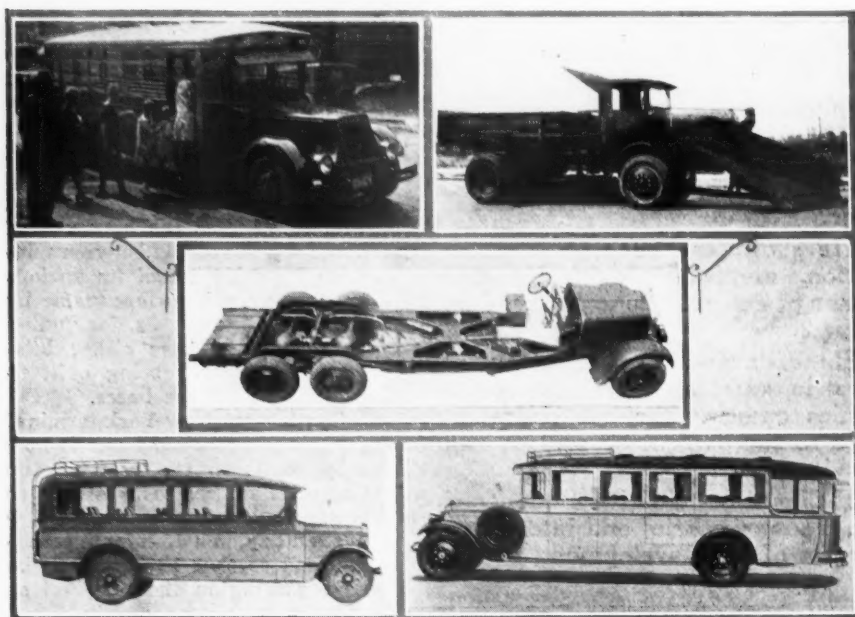
Engineers Improve

*Latest Models Are Longer-Lived and
Capable of Higher Average
Operating Speeds*

*Economy
Speed
Comfort
Appearance*

By

Donald Blanchard



Above—Mack 29-passenger, six-cylinder model and Walter snow fighter. Below—Graham Brothers 16-passenger, six-cylinder parlor coach and Studebaker 22-passenger parlor observation model. Center—The improved Safeway Six-Wheeler

MORE economical operation, higher average operating speeds, increased riding comfort and improved appearance continue to be the main objectives of bus design development work. Real progress toward these goals is being made although changes from year to year are not so noticeable as they once were for the reason that the industry has reached the stage where generally speaking improvement is the result of detail revision rather than radical departure from previous practice.

Sufficient operating experience has been accumulated so that the specialized requirements of bus transportation as they relate to vehicle design are quite thoroughly understood. With a more definite knowledge of requirements, engineers have been able to improve the design by strengthening parts, increasing factors of safety, using better materials, providing better lubrication, etc. The result has been that the life of the vehicle, measured in miles, has been stepped up considerably, as is indicated by the fact that numerous operators have made substantial increases in the mileage on which they figure depreciation. Obviously this has reduced the depreciation expense per mile operated.

An outstanding example of how improved design is

reducing maintenance costs is the fact that with the newer bus models some operators have found it possible to double the mileage between overhauls of engines and some other units. In addition, more attention is being paid in the initial design to the requirements of the maintenance department so that repairs, replacements and adjustments can be made at less cost although this field still offers large opportunities for further development. Another factor influencing maintenance costs favorably is the rapid development of shop equipment which makes it possible to cut labor costs and improve the quality of the work.

Steady progress is being made in the improvement of braking systems. This phase of design is a very difficult problem because of the tremendous amounts of energy to be dissipated in the form of heat, but it is being attacked successfully although much remains to be accomplished.

While progress has been made in increasing the specific fuel consumption of engines—that is, the pounds of gasoline consumed per brake horsepower hour—these gains have not always been translated into greater gasoline mileage. Increasing congested traffic conditions resulting in a greater proportion of idling time, more frequent and more rapid accelerations and other factors have to some extent offset the work of the engine designers in improving fuel economy. It is probable with the more widespread distribution and use of anti-knock fuels that compression ratios will show further increases which, of course, will mean increased gasoline mileage and possibly some reductions in maintenance expense.

Whether the driver gets a kick out of his job or not often has an important effect on operating expense and for this reason an increasing amount of attention is being given to his comfort. Steering gears have been improved, control levers made more convenient and on the larger types particularly, power brakes are being provided with increasing frequency. Similar development work is going on in both the clutch and transmission field and for city service the gas-electric type

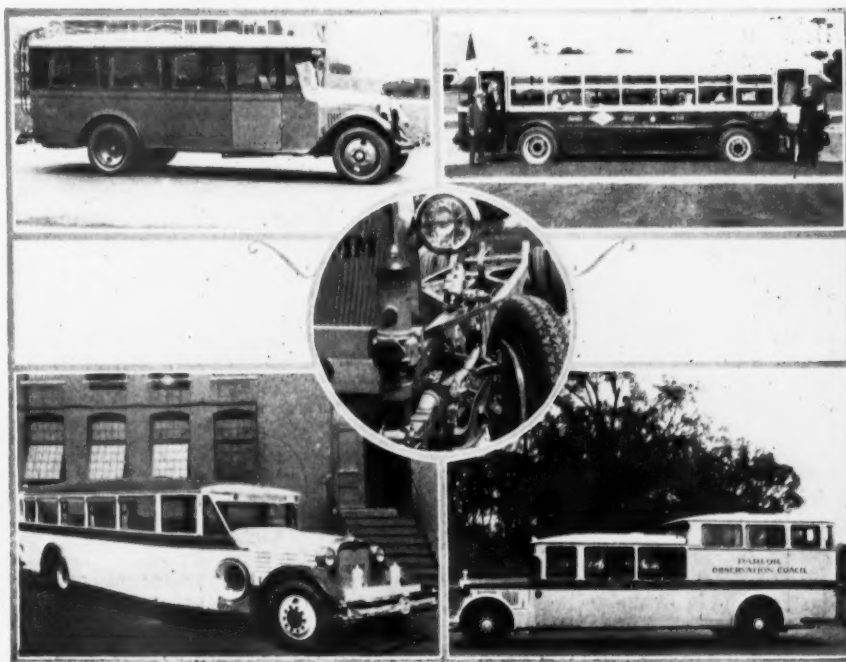
in Latest Bus Models

has made considerable progress.

Average operating speed and passenger revenue are very closely linked. In addition, passengers want to be transported as rapidly as possible so that speed is a real sales factor. Increasing traffic congestion has made rapid acceleration as well as fast braking essential if average operating speeds are to be maintained. For acceleration this has resulted in engines of increased size, and greater flexibility and smoothness. These conditions are in part responsible for the increasing use of the six-cylinder engine.

Particularly where the bus is used in competition with other types of transportation, riding comfort is a matter of great importance. Better upholstery and seat designs have been factors in producing greater comfort as have improvements in ventilation and interior lighting. In addition, six-cylinder engines have reduced vibration, and pneumatic tires, in some cases of the balloon type, combined with better spring suspension, have given better riding.

Appearance is another factor that has undergone improvement especially because it is recognized that buses that are easy to look at are good salesmen. The development has been particularly noticeable around the front end of the vehicle where the lines have been smoothed



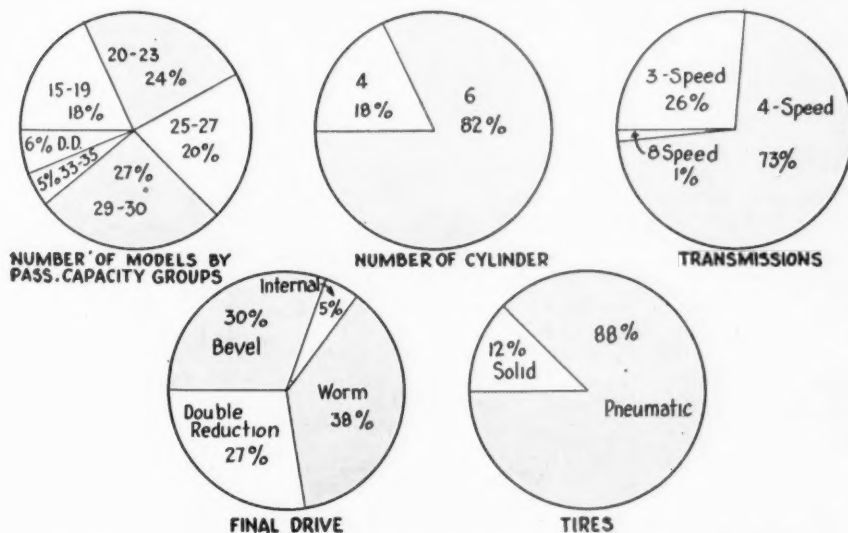
Above—I. H. C. Model 15 with club coach body and the Twin Coach. Below—Gramm deluxe parlor car and A. C. F. parlor observation model. Center—View of shackle and shock-absorber on Gramm

out considerably. Much has been done to reduce overall height and, at the same time, the tendency toward long, sweeping lines has accentuated lowness.

Analysis of 84 bus models with conventional gear transmissions throws some interesting light on the general characteristics of chassis in current production. Classifying these chassis according to passenger carrying capacity, it is found that the sizes showing the largest number of models are of 29, 25 and 21-passenger capacity respectively. For purposes of comparison, the various chassis models have been grouped into the following classes: 15 to 19 inclusive, 20 to 23 inclusive, 25 to 27 inclusive, 29 to 30, 34 to 35, and double deckers.

In interpreting the figures relative to the various groups presented in the following, it is important to remember that some of the variations are due to the fact that all the passenger capacity ratings are not for the same type of body nor are the different chassis all designed for the same type of service.

In the 15-passenger classification, which includes 15 different models, the average wheelbase is 172 in. The

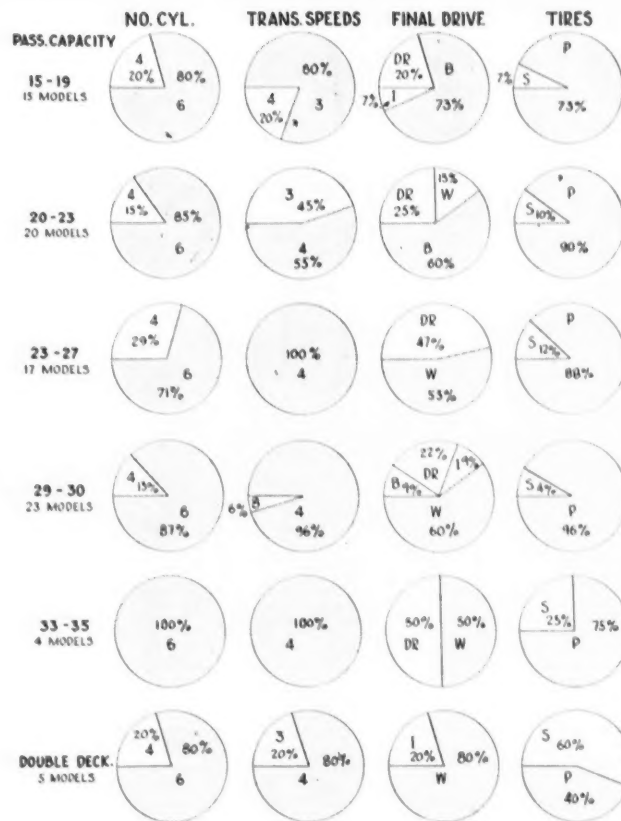


Graphic classification of 84 bus chassis on the basis of carrying capacity, number of engine cylinders, transmission speeds, final drive and tires

average chassis weight in this group is 4200 lb. and the average total weight with body, 7200 lb. Twelve of the 15 models in this group have six-cylinder engines, the others having fours. The average engine piston displacement is 268 cu. in. Three-speed transmissions are most generally used in this class as only three models have four-speed gear-boxes. The bevel gear final drive predominates with 11 models, double reduction and internal gear being represented by three and one respectively. Pneumatics are provided on all but one model.

The next larger classification, the 20-23-passenger group, includes 20 models. In this instance the average wheelbase is 184 in., average chassis weight, 5000 lb. and average weight complete with body 8300 lb. The average piston displacement is 310 cu. in. and of the 20 models, 17 have six-cylinder engines. This group is almost equally divided between three and four-speed transmissions, there being nine of the former and 11 of the latter. Bevel gear drives again are found in the majority, 12 models having this type, although five have double reduction and three worm axles. In this group pneumatic tires are furnished on all but two models.

Seventeen chassis with an average wheelbase of 208 in. are included in the 25-27-passenger classification.

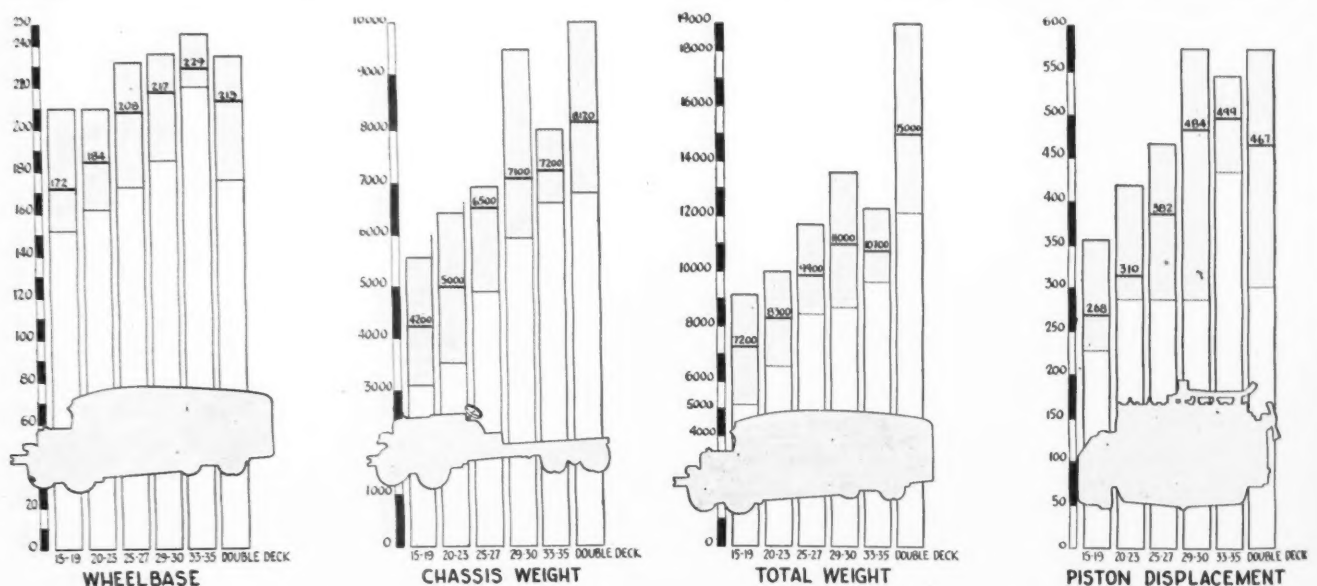


Showing variations as to number of cylinders, speeds, drive and tires in six passenger capacity groups

The average weights of chassis and of chassis complete with body are 6500 lb. and 9900 lb. respectively. Twelve of the models have six-cylinder engines and the average piston displacement for the group is 382 cu. in. All models in this class have four-speed transmissions. In the matter of final drive the group is almost equally divided, nine having the worm type and eight the double reduction axle. Only two models are equipped with solid tires.

The largest group is the 29-30-passenger classification with 23 models. These models have an average wheelbase of 217 in. Complete with body the average weight in this class is 11,000 lb. and without body, 7100 lb. All but three of the engines in this group are sixes. Average piston displacement is 484 cu. in. One model in this group has an eight-speed transmission, the remaining 22 having four-speed units. In fourteen instances worm rear axles are employed while five models have double reduction types with two models each with bevel and internal gear. Pneumatic tires are provided on all but one model in this group.

Only four models are included in the 33-35-passenger classification. Average piston displacement in this group is 499 cu. in. The average wheelbase is 229 cu. in. (Turn to page 27, please)



Charts showing how wheelbase, chassis weight, total weight and piston displacement varies with passenger capacity. The figures indicate the average for the models in each capacity group and the shaded areas the maximum-minimum range

Show the Prospect *What You Have to Sell*

*Advises Detroit Dealer
Who Averages 50
Chevrolet Truck
Sales Monthly—
Truck and Car
Business Han-
dled Sepa-
rately*

By Dwight G. Baird



"We showed Geymann & Miller why our truck was the right job for their wholesale business"

THERE'S nothing like taking along a cab job and showing the prospect just what you have to offer, when it comes to selling Chevrolet trucks, in the opinion of George Crippen, manager of the truck division of Bielman-Taube Company, Chevrolet dealer in Detroit; a dealership that built up a volume of truck sales that ran as high as seventy a month during the first year and that has averaged about fifty a month ever since it began pushing trucks.

Everyone who is at all familiar with motor cars is familiar with the Chevrolet passenger car, Mr. Crippen points out, but this wide acquaintance with the product is not always an asset to the Chevrolet dealer in selling trucks. On the contrary, it is a handicap. Mention Chevrolet to a prospect and he immediately thinks he is well acquainted with it, when the chances are about 99 to one that he has a mental image of a Chevrolet passenger car and hasn't a clear idea of the merits of the Chevrolet truck, at all.

"When we first began selling Chevrolet trucks, we soon found that very few people knew what we had to offer," Mr. Crippen said. "Talk did very little good, because everyone thought he knew all about the Chevrolet. What he usually had in mind was the Chevrolet passenger car, of course, and when we talked Chevrolet trucks, he thought of a Chevrolet

passenger car chassis with a truck body. As a result, the prospect frequently thought the Chevrolet was too light for his job and no amount of talk would alter his opinion.

"That was one of the chief reasons why Mr. Bielman recommended a year and a-half or more ago that Chevrolet passenger cars and trucks be separated and truck dealers appointed. His point was well taken and now we have only four Chevrolet dealers in Detroit who handle trucks and they all handle them separately from their passenger cars.

"Few, if any salesrooms, provide adequate display facilities for both cars and trucks without being badly crowded. Not only so, but if the display is a mixed one of Chevrolet cars and trucks, the impression that a Chevrolet truck is just a Chevrolet car with a truck body is likely to be confirmed by the casual passerby. But with an entirely separate display, there is no doubt as to the character of the vehicles on display in the truck salesroom; they are motor trucks any way you look at them.

"This arrangement also makes it practical to use truck signs to emphasize the fact that this is a truck salesroom and to get the attention of those who are interested in trucks. When a prospect enters this salesroom, we know he is interested in trucks, not in passenger cars, and there are no cars standing around to distract his attention or to remind him of the possibility of trading us some old piece of a car on a new truck.

"Then, too, we find it much better to operate the two divisions separately, keeping the service separate.



Demonstrations sold these light trucks

(Turn to page 20, please)

How School Boards

Rapidly Expanding Use of Buses for Transportation of School Children Provides Fertile Field for Dealer Sales Effort

By James W. Cottrell

INCREASING use of buses for transportation of school children presents perhaps the best opportunity for bus sales by commercial vehicle dealers. Of approximately 80,000 buses in use January 1, 1927, it is estimated that some 32,000 were owned by public and private schools compared with 43,000 in common carrier operation. The number of buses devoted to school use has more than doubled in the past two years according to reliable estimates.

School bus business is very desirable from the standpoint of the dealer. Pay is sure and there is no financing in the ordinary sense of the word, which is not always true in the case of other bus operators. Even though the school district does not own buses but buys motor transportation under contract from private individuals the latter are desirable customers because of the fact that they are bonded to the school authorities and must have standing and ability in order to secure contracts. The larger common carriers are frequently sold as national accounts and, where this is the case, elimination of this element from the total of bus sales makes the school field of greater importance to dealers.

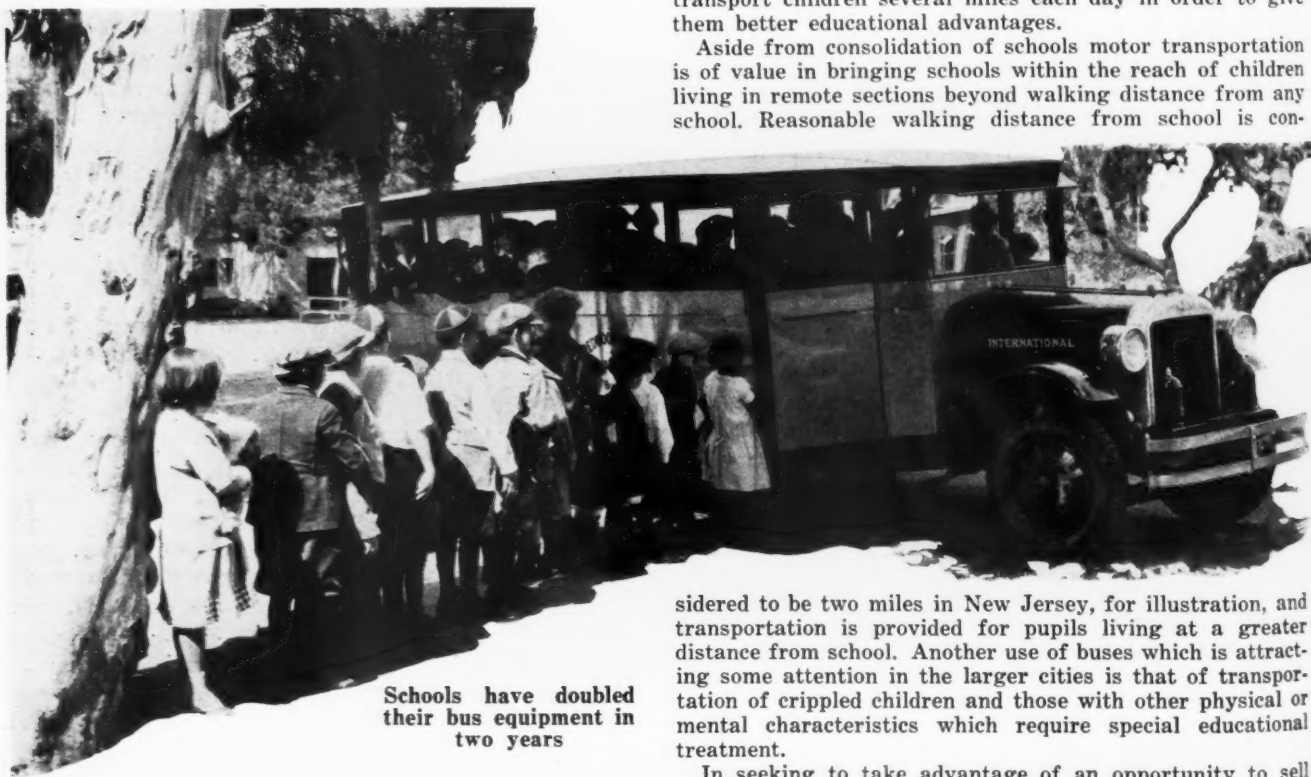
The use of buses for transportation of school pupils is closely linked with the consolidated school idea. Consequent upon the marked increase in mileage of improved roads and a corresponding growth of transportation facilities, the isolation of distant rural sections rapidly disappeared and attention of parents and of schoolmen was directed to the

THE author of this article is a member of the Board of Education of the School District of Hammonton, N. J., which has bought eight buses in the last few years, and also is technical editor of *Commercial Car Journal*. As a member of a Board of Education, he knows how school buses are bought, and as a member of the editorial staff of this publication, he is intimately acquainted with the merchandising of motor buses and trucks.

It will pay every dealer to read this article for the wealth of practical information it contains.

one room school—the “little red schoolhouse” of poem and song. It was realized that one room and one teacher could not provide either the physical or the mental requirements of education to match that available in towns and cities. The obvious remedy was to combine several single room schools into one larger school and with good roads and motor transportation available it was found feasible to transport children several miles each day in order to give them better educational advantages.

Aside from consolidation of schools motor transportation is of value in bringing schools within the reach of children living in remote sections beyond walking distance from any school. Reasonable walking distance from school is con-

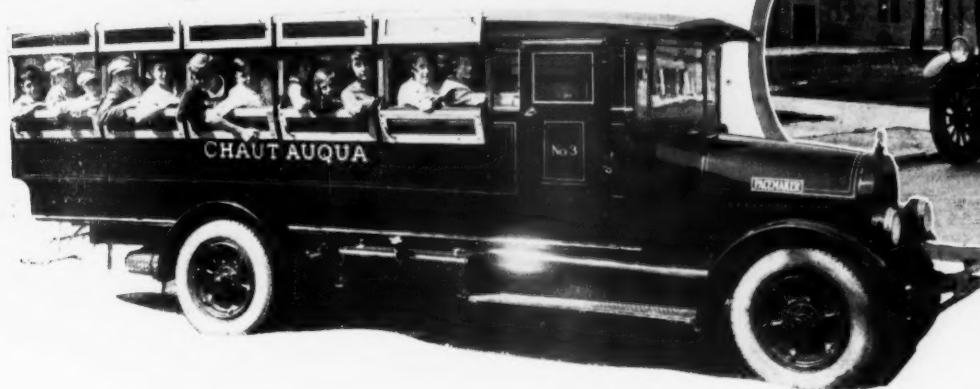


Schools have doubled their bus equipment in two years

sidered to be two miles in New Jersey, for illustration, and transportation is provided for pupils living at a greater distance from school. Another use of buses which is attracting some attention in the larger cities is that of transportation of crippled children and those with other physical or mental characteristics which require special educational treatment.

In seeking to take advantage of an opportunity to sell

Buy Buses



School Boards need advice as to number, size and type of buses, routes, service, etc.

buses for school use many dealers and salesmen find themselves at a loss as to how to proceed. While they would not hesitate to interview each member of the board of education individually they have a feeling something akin to stage fright in appearing before the board as a body and presenting their cases. In many instances the school board members know little of the details of bus construction, operation or maintenance and sales arguments which would have weight with a common carrier executive cannot be used at all with boards of education.

The situation is further complicated by uncertainty as to the status of the superintendent or supervising principal, the clerk of the board of education and of standing committees of the board itself. There is a lack of uniformity in assigning functions and authority to the various persons who comprise the administrative and executive personnel of a school system. In some states some of the functions are set by statute and in any event the rules of the individual board are a factor.

Modern practice in school administration tends toward the idea that the board of education is an administrative body which passes on broad questions of policy and selects from the field of education those elements which seem best for the interest of the children of the community. In line with this plan the supervising principal or superintendent is the chief executive officer and he is charged with the responsibility of seeing that the policies of the board are carried out and with the duty of advising the board on questions of policy and reporting to them the status of school affairs at each meeting. In many school districts the division between administrative and executive functions is not clearly drawn and standing committees of the board perform duties which are delegated to the supervising principal in other districts. The clerk of the board is made responsible for certain duties by law in some states while in others he is simply secretary of the board meetings.

In approaching the problem of selling a bus to a school district it is therefore advisable to find out the set-up of the school administration so that effort can be directed in the proper channel. It is a bit disconcerting to make a brilliant sales talk to a board of education and then have the whole matter referred to the superintendent, who has not previously been interviewed. The information desired can be obtained from the clerk of the board and, as he has at hand much information on which sales arguments can be based, it is well to interview him.

Recommendation as to size, type and even make of bus is the function of the superintendent in many school districts, particularly those in cities and the larger towns. He is familiar with the problems of the school system, the number and location of the pupils to be transported and the time available for trips. He, like members of the

board, is not an expert on automotive construction and he makes his choice from the school viewpoint.

Considering these facts the dealer attempting to sell a bus to a school district can well take advantage of the opportunity to place himself in the position of adviser to the superintendent and board of education on the question of motor transportation. The laying out of routes so that there is a minimum of "dead" mileage, determination of the number of routes required to bring the children to school on time without requiring them to meet the bus too early in the morning, size and seating arrangement of the buses and the equipment are among the questions confronting school authorities which an alert dealer can help to answer. Whether to use one large or two smaller buses has puzzled more than one schoolman; choice between single or dual tires may not be easy.

Help Study Transportation Needs

By offering to go over the transportation problem with those in authority in the school and spending the time necessary to make a definite recommendation founded on facts the dealer can overcome any fear complex in meeting the board in session because he will have something of value to offer to them and the board will be interested in hearing his message.

Reliability is one characteristic of a bus on which schoolmen put much emphasis. The dealer should assure the school authorities that he has parts, equipment and personnel equal to the job of keeping the buses in operation.

Advice concerning routine maintenance of buses is valuable to the school superintendent. Mileage between oil changes, the need of changing oil, air pressure in tires, need and manner of making periodic inspections are illustrations of points about which a superintendent may be uncertain and concerning which he welcomes advice.

Mileage of school buses is comparatively low, being of the order of 7000 to 8000 miles per year. As the vehicles are operated only five days a week and there is an idle period of several hours during school sessions there is ample opportunity to do all ordinary repair work without interfering with regular trips.

The design of special bodies for school work has attracted the attention of both vehicle manufacturers and body builders. Although school bus bodies are less ornate than buses used for city passenger transportation a pleasing appearance has been achieved without adding greatly to the cost of the vehicle. Due to the fact that the superintendent and board members have only a general knowledge of automotive construction they are influenced to a large degree by the body design of competing vehicles and general appearance, comfort and seating arrangement are carefully scrutinized.

What is Congress Going

A Critical Discussion of Federal Regulation of Motor Transportation and the Probable Legislative



Dr. G. Lloyd Wilson

and bus manufacturers and operators, railroad, electric railway and other carrier organizations, the national associations of state public utility commissioners, associations of business executives and the public are witnessing a motor show of unusual proportions—the display of models of Federal regulatory plans to be applied to automotive transportation. A discussion of Federal regulation of motor transportation with representatives of a half dozen of the interested groups present is apt to result in at least seven plans, each with merit and logic on its side and each with certain fundamental defects on difficulties.

The attitude of the motor manufacturer's group toward regulation of the bus is perhaps best expressed in an address of A. J. Brosseau, President of Mack Trucks, Inc., in an address delivered before the Bus Division of the American Automobile Association in June, 1927. Mr. Brosseau concedes that regulation is not only inevitable but desirable if it results in the protection of carriers against destructive and uneconomic competition. Since the motor transportation industry is young and mobile, regulation of the same elaborate type applied to the older and less mobile rail lines should not be applied to automotive transportation. "Legislators, in many cases, did not take into consideration the fact that the bus performs an entirely different service from that of the rail line and should be regulated as a bus—not as a rail vehicle.

"Bus regulation, of the rail type, is not only restricted but it is contrary to the public interest." Mr. Brosseau believes that bus development can only come as a result of regulation based upon the following principles: Varying standards of rates; liberal policies with respect to the development of new lines; sympathetic cooperation on the part of regulating bodies with respect to flexible bus schedules adjusted so as to give necessary service with a minimum of waste; and, protection of existing lines of one type against interlopers of the same type, provided the requirements of public service are met.

Bus manufacturers, naturally, are interested in seeing the operation of buses put on a sound and profitable basis for their customers who use buses in carrier services

THERE is almost universal conviction upon the part of all close students of motor transportation that the next Congress will enact a law applying to interstate commerce by motor vehicles. The great perplexing problem is the form the legislation will take.

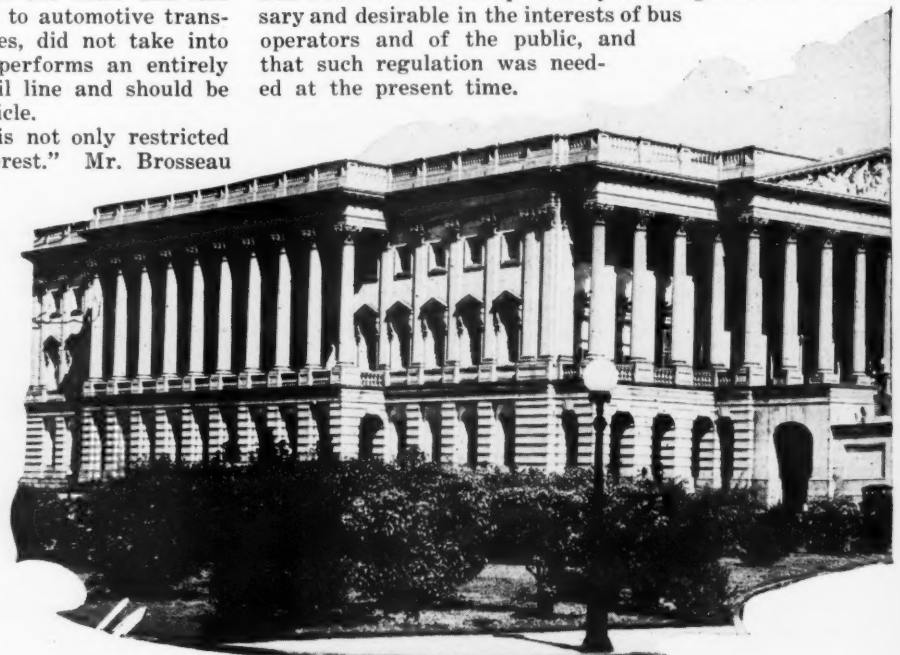
Congress, the Interstate Commerce Commission, associations of truck

in order to protect and extend the market for buses. The best interests of the manufacturers are served when legislation tends to assure the operation of buses by capable and responsible operators on a basis of the best interests of the users of transportation service—the public—and a fair return to the operators.

Mr. Brosseau points out that the bus industry is young, virile and growing and that it will grow faster and on a more substantial basis if those interested in its development keep constantly in mind that the public interest should have the first consideration. The interests of the public in existing rail carriers should not be overlooked. "I am not one of those who believes that if a rail carrier has adequate physical facilities to carry passengers over a given route, the public should be denied the use of the bus if it wants and is willing to pay for that form of transportation. In such instances regulating bodies should determine to what extent the rail carriers may add or substitute bus for rail service, or grant franchises to an independent operator. The carrier—whether rail or highway—should be protected against destructive and uneconomic competition so long as it properly serves the public."

Bus operators in interstate commerce have gradually changed their attitude toward Federal regulations from one of antagonism to all forms of interstate regulation to an endorsement of bus regulation at the present time rather than at some future date. In this the attitude of bus operators differs rather sharply from that of interstate motor truck operators, to most of whom regulation is an anathema to be postponed to some remote time.

Mr. L. A. Markel, chairman of the legislative committee of the Bus Division of the American Automobile Association, in the hearing before the Senate Committee on Interstate Commerce on the Cummins-Parker Bill, stated that the Bus Division stated emphatically that regulation was necessary and desirable in the interests of bus operators and of the public, and that such regulation was needed at the present time.



to Do?

lation of Interstate able Course of Action

By

Dr. G. Lloyd Wilson

Amendments were suggested to the Cummins-Parker Bill which altered it in details rather than in principle. The principle of interstate regulation through the agencies of the state regulatory commissions with joint boards to pass on interstate questions and appeals to the Interstate Commission was urged as sound because of the experience of the State Commissions in regulating bus transportation which for the most part is yet a local business.

"We are not impressed by the arguments presented to us by a few that the time has not arrived for legislation or that sufficient facts have not been assembled to occasion legislation. Thirty-eight states are today functioning under regulatory measures, some of which have been in operation for ten or more years, giving the state commissions ample opportunity to assemble such facts and data as to enable them to properly and constructively regulate motor carriers. Since the local commissions in a majority of the cases will function (to regulate interstate operations) there is no reason to assume that their conduct under interstate regulation will be any different than under intra-state regulation with which they are not familiar and in accord."

The steam and favor the regulation of transportation an attitude is outlined

electric railways ion of motor bus nd their general ed in the following: The rail carriers are stringently regulated and they feel that their com-



CONGRESS is expected to provide for the Federal regulation of interstate motor transportation, although the strong opposition voiced by truck operators to such legislation applied to their operations may result in a law covering only the bus field.

Because of the importance of such legislation, interest in the type of legislation Congress may enact is at a high point. In the accompanying article, Dr. Wilson discusses the varying viewpoints of the various interested parties and also the possible courses of Congressional action.

petitors operating over the highways should be regulated. There is a well-defined fear that unregulated motor bus transportation tends to impair the efficiency and adequacy of other existing and essential transportation agencies. Motor bus operations should be justified before regulatory bodies on the score of the convenience and necessity of the services to be performed by these bodies before operations in competition with rail, electric railway or other motor bus lines are begun. Otherwise the established carriers are injured by having part of their traffic diverted to the new competitors without the public receiving any appreciable benefit if the new service is not justified by a substantial increase in the convenience of the traveling public or a demonstration of the economic necessity for the new and additional service.

The regulations of the Interstate Commerce Commissions pertaining to the railroad passenger business require the publication of fares and forbid the railroads from changing fares without due notice and hearing and forbid the deviation from the published fares. Railroads cannot therefore meet the fare competition of unregulated interstate motor bus companies which can set rates of fare at any figure they choose and change them at will.

A. P. Thorn, Jr., general solicitor, American Association of Railway Executives, a leading spokesman for the railroad group, in an address before the Conference on Motor Vehicle Regulation, urged that legislation be enacted to apply to motor vehicle transportation in interstate commerce requiring operators of such services to make a proper showing of the public convenience and necessity of such services just as the railroads are required to demonstrate the public convenience and necessity of new lines of railroad or the extension of existing lines and to justify the abandonment of existing lines. Mr. Thorn urges further

that the rates, fares and charges of motor lines be regulated, that indemnity bonds be required of operators to guarantee the payment of claims against the motor carriers and that state and joint interstate boards be given jurisdiction over motor transportation with appellate jurisdiction in the Interstate Commerce Commission.

The attitude of business men and associations of these men toward regulation runs the entire gamut from that of favoring stringent legislation to one of advocating no regulation at all. Perhaps the most representative attitude is that taken by the Chamber of Commerce of the United States which represents a cross section of the business organizations and commercial bodies of the United States. A report of a special committee of this body upon the relation of highways and motor transport to

(Turn to page 32, please)

Federal Offers Daily Truck Expense Control

FEDERAL'S system of expense control, announced in the August COMMERCIAL CAR JOURNAL, is designed to enable the operator to follow and control the work and cost of each truck in his fleet so that the most service can be realized from his hauling equipment at the least cost.

Copyrighted in 1924, the plan was originally designed for Federal owners exclusively, but since it has worked out so satisfactorily for some of the largest fleet owners in the country, M. L. Pulcher, president of the Federal company, decided to make it available to everyone.

The plan essentially is an application of the budget principle, using past truck performance and cost records as a basis. If past records are not available the Federal system provides a temporary budget plan for use until necessary facts are developed.

Only one form, one for each truck, is used in the system. It is known as the Daily Operating Report. The form, reproduced herewith, is only a sample and its classifications may be modified or expanded to suit the conditions of individual operators. But a condensed classification is recommended because of its greater practicability in connection with budgeting. Daily entries are made under each classification on the horizontal line opposite the particular day of the month. Thirty-one days are listed down the left margin.

The daily budget figure is entered in red just under each classification, which permits quick comparison with actual daily performance as entries are made.

Mileage is used as a basis for setting up the budget.

BUDGET MONTHLY FIXED CHARGES					Daily Operating Report				
Insurance	\$	55.00			Total Costs this Month	\$575.30	Truck No.	15	
Interest and License		15.00			Total Mileage this Month	1450	Driver No.	65	
Garage		25.00			Operating Costs per mile	39.7 cents	Month	May	
Total		95.00					Year	1927	
DATE	MILES	WAGES	GAS ELECTRIC	LUBRICANTS	TIRES	MAINTENANCE	DEPRECIATION	FIXED CHARGES	TOTAL
Budget	70	\$6.00	\$2.00	\$6.25	\$3.50	\$3.50	\$6.30	\$3.52	\$25.07
1	60	8.00	2.50	.80	3.00	1.25	5.40	3.50	24.45
2	50	6.00	1.75		2.50		4.50	3.50	18.25
3	75	7.00	2.25		3.75		6.75	3.52	23.27
4	65	6.00	2.25		3.25		5.85	3.52	20.87
18	Sunday								
19	50	6.00	1.40	1.20	2.50	4.35	4.50	3.52	23.37
20	60	6.00	1.60	.40	3.00		5.40	3.52	19.92
21	60	6.00	1.80		3.00		5.40	3.52	19.72
	1450	\$177.00	\$47.00	\$7.45	\$74.50	\$43.85	\$130.50	\$95.00	\$575.30

Operating Report showing condensed classification and budget figures

All work is expressed in terms of mileage instead of on an hourly or daily basis because of the variations that come in operation. For example, a truck with the greater mileage will wear out faster than another of the same age but with less mileage. For the purpose of the budget, depreciation is computed on the same basis.

Daily variations in any of the columns in relation to the budget figures indicate either a misalignment of operating facts or a loss in operating performance. If the budget figure is properly established continued losses in any of the classifications signifies the need for investigating the cause. The advantage of this system to the operator is that losses can be traced immediately upon detection and not 30 days later when the facts pertaining to the incident are unavailable and forgotten.

The budget and actual totals at the left is another important feature as it casts light on operating conditions on a monthly basis. Comparisons can be made between the actual and budgeted expenses and the report of one truck against reports for similar trucks.

Show the Prospect What You Have to Sell

(Continued from page 15)

the salesmen separate, and allowing each division to concentrate on its particular job.

"Our salesmen are supplied with albums of photographs and specifications, both on the chassis and on bodies made by several different body concerns, as well as the Chevrolet standard jobs, and that is well enough as far as it goes. But *nothing takes the place of a demonstration*; not necessarily a demonstration of load-carrying, but just a demonstration of what the Chevrolet truck is. Our regular cab job is well suited for this purpose, because it leaves the chassis open to full view and enables us to show the prospect the various features without having him get down and crawl under it.

"There was the case of a cartage man who was operating eleven rather heavy trucks of another make. He was not satisfied with the trucks he was using, because it cost too much to operate them; but, on the other hand, he was quite positive the Chevrolet was

too light to do his work. He had just about made up his mind to switch to another make, when I took one of our cab chassis out and showed him, point by point, just why the Chevrolet was a great deal stronger than he had thought and fully strong enough for his work. He took two Chevrolets and will take others from time to time, as he is able, till eventually his whole fleet will be made up of Chevrolets.

The *demonstration* has been a major feature of the company's selling plans, but it alone would hardly account for its success. Among the other features which Mr. Crippen points out are 24-hour service, seven days a week, keeping the salesroom open from 7 a.m. till 8 p.m. and on Sundays following up owners, and servicing every job before it goes out.

Servicing every job before it is delivered is considered very important.

"We spend about three hours' service on each job," Mr. Crippen said. "The trucks have been driven here from Flint and have about 70 miles on them, and we find it a mighty good idea to give them a thorough inspection and make sure they are well lubricated before letting them go out."

C. C. J. Shop Ideas

THIS page is designed primarily to help service station repairmen in exacting economies in time, labor and money. Salesmen, however, can also profit by scanning over these practical hints.

The average buyer today is more conversant with the important details of truck operation and maintenance than ever before. A money-saving idea will often result in a sale.

Readers have secured many valuable suggestions from the series of ideas published. We want more useful hints and will pay \$5 for each new idea accepted. Give exact dimensions of parts to be made to enable other readers to duplicate the device.

No. 151. Removing Dump Truck Transmission

Lowering a transmission on a 5-ton dump truck is expedited by using the body as a hoist. The body is first raised to its full height. A sling is then passed around the transmission and jackshaft and fastened under the body. The transmission is next disconnected from the frame and lowered by lowering the body gradually. A dolly or portable stand should be used to support and move the transmission after it is detached from frame and lowered to place.—Theodore Schelling, 232 Broadway, Saranac Lake, N. Y.

No. 152. Hoisting Worm Assemblies

Removal of a worm-gear carrier assembly is no longer a back-breaking job in our shop. We bore a hole in the floor of the body, pass a cable through it, loop the cable over the assembly lug or through the eye, fasten with a cable clamp and pull up with a chain hoist above the body. The hole should be on the center line of the body, measured from side to side, but to the rear of the center of the worm assembly so this part will swing out when lifted.—Henry C. Detmers, 229 Prospect Ave., Bell, Calif.

No. 153. Attaching Shock Absorber Clamp

A forked handle, shaped like a bicycle front fork, solved the stiff problem of reconnecting a shock absorber strap with new clamp attached. The fork is made just a little wider than the strap. A notch is made in each side fork to locate the clamp. After the clamp is applied to the strap one end of the fork is placed under the axle with the sides of the fork straddling the strap. A push downward on the single handle pulls the strap out far enough to allow attachment of the clamp to the axle.—Fred J. Harrison, Runnels Garage, DeKalb, Ill.

No. 154. Lubricant Supply for Hone

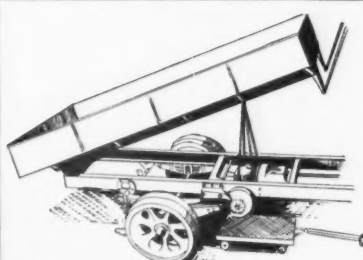
A continuous supply of kerosene, or other lubricant, for a hone is easily provided by the tank and piping shown. A flat can of 1 quart capacity is attached to the frame of an electric drill. The straps are soldered to the can and

clamped around the drill. A pet cock is soldered to the bottom of the can and a piece of $\frac{1}{8}$ in. copper tubing attached to the pet cock. Adjustment of the rate of feed of lubricant is easily made by means of the pet cock. An automatic feed is thus provided which does not require attention during the progress of the job. When an oil can is used to supply lubricant for the hone another man is required if a continuous flow is maintained.

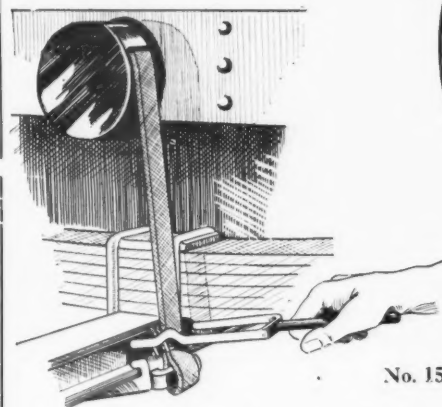
The copper pipe should be near, but not touch the cylinder wall when the hone is in use.—J. H. Boeschen, Addieville Garage, Addieville, Ill.

No. 155. Dressing Badly Gouged Tires

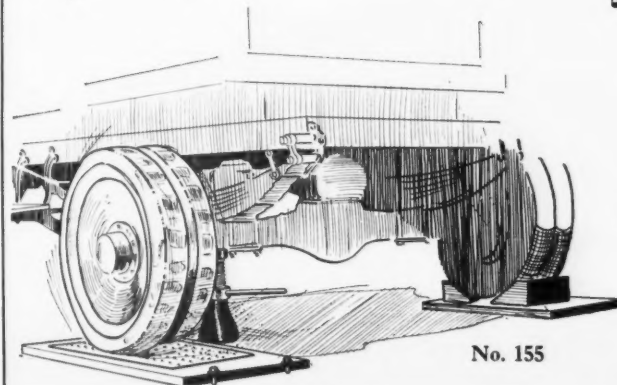
A large-size grater provides a means for smoothing solid tires which are gouged by bad roads and chains. The grater is made of 24 gage galvanized sheet. Sharp points are formed with a prick punch. The grater is blocked, or bolted, in place and all wheels except the one being treated also blocked. The free wheel is revolved with transmission in first speed. The wheel is fed on the grater by a screw jack.—F. Davis, 42 Keith St., Springfield, Mass.



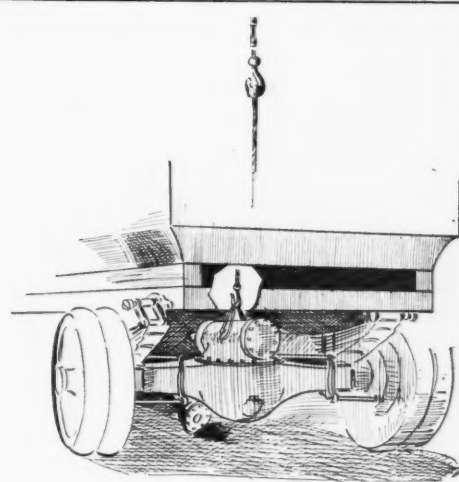
No. 151



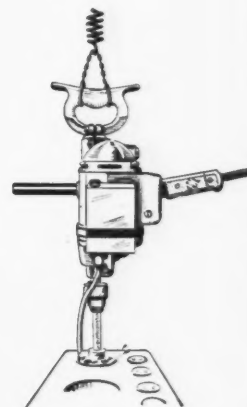
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No. 155



No. 152



No. 154

Front Axle Straightening COLD

*Bends and Twists May Be Removed in a
Press Without Heating*

MANY service men prefer to restore bent front axles to original alignment without heating because of the danger of destroying the effect of heat treatment during manufacture of the forgings. Front axles can be straightened while cold in any well-equipped shop and the time required is less than that usually necessary to repair other damage resulting from a collision.

Some little skill and judgment is required in straightening axles cold. The fundamental idea is that of bending in the opposite direction to the misalignment. But in order to remove a bend it is necessary to apply pressure until there is a bend in the opposite direction. The greater part of this reverse bending takes up the natural "spring" in the metal and this amount is restored when pressure is released. After this preliminary deflection of the metal is accomplished only a slight amount of additional movement is needed permanently to bend the part. If too little pressure is used the axle will return to the shape it had before the pressure was applied and if too much pressure is applied the axle may be bent in an opposite direction to that due to the collision which will make a second straightening necessary.

Removal of twists involves the same problem as that of straightening. There is quite a bit of "give" to an axle when one yoke is twisted while the other is held firm. With a long bar through a yoke the movement of the end of the bar through an arc of 2 ft. may bring the yoke back to, and beyond, its original position without removing any of the twist resulting from an accident. In the same case a movement of the end of the bar a few inches beyond the 2 ft. position may bend the axle back to original alignment and but a few more inches of movement will produce a twist in the opposite direction.

Because of these facts some little experience is required in order that the mechanic may recognize the point in the bending operation which is really bending the axle rather than applying the pressure which is a necessary preliminary to bending. The experience may be acquired without much cost by experimenting with an axle of obsolete pattern or on an actual job by applying pressure known to be too low and increasing in successive steps.

Bending and twisting required to straighten an axle should be kept at a minimum and bending too far with the resulting need to bend a second time in the opposite direction should be avoided whenever possible, as repeated bending back and forth tends to weaken the axle.

The equipment required for straightening axles cold consists of a heavy-duty press, a steel straight edge approximately as long as the axle, two rods with bushings to fit the axle yokes, two or three heavy bars of vary-

ing lengths and a miscellaneous assortment of metal blocks.

The first step in straightening procedure, after the axle has been removed from the chassis, is to determine the exact location and extent of the misalignment. Axles damaged in traffic accidents may be twisted or bent—usually both. As the cold straightening process depends upon the application of pressure to bend the axle back to normal position it is essential that the spot where the bending force was applied to the axle be located in order that pressure may be applied at this place and in the opposite direction. Bends of large degree can be located by sighting along the forging ridge on the center line of the axle. Twists are checked by placing the rods through the yokes as shown in Fig. 1 and sighting from either end.

It is very difficult to remove at one time both twist and bend and for this reason it is customary to give first attention to bends and afterward to take out twists. If the spring pad directly connects with the yoke both bends and twists will ordinarily be found in the section between spring pads. In case the spring pad is some distance inward from the yokes there may be either bend or twist between the yoke and pad and this condition must be checked separately.

When the bend has been located the axle is placed on the bed of the press and supported on two blocks, one at either end of the bend. The plunger of the press is positioned over the highest part of the bend. It is important that the blocks and plunger be placed accurately, otherwise other minor bends may be put in the axle during the straightening process. With the axle in position pressure is applied by the press until the axle is straight. A pause may well be made at this point for an inspection of the axle and for a determination of the amount of twist. The press is again operated and the axle bent in a reverse curve, as mentioned before.

In case the axle is not bent in a simple curve but in several different curves all within the same area, it will be necessary to remove the largest bend first and then attack those at either end in turn. If too much pressure has been applied and the axle is bent in a reverse direction it is turned over on the press table and bent again until in alignment.

Accurate check of alignment is accomplished by placing the straight edge on the edges of the two spring pads as indicated in Fig. 2. Some allowance must be made in this measurement if there is twist in the axle but in any case an approximate check of straightness is made.

To remove twists it is necessary to locate the point where the twist starts in order that straightening may remove one twist rather than counteract it by adding a second. In some instances the

A method of restoring the alignment of front axles by heating in a blacksmith's forge and straightening while red hot was described in the March, 1927, issue of Commercial Car Journal. The principle of checking alignment is the same whether axles are straightened hot or cold. In the former case speed is essential in order that the check, and possible further correction, may be made before the axle cools.

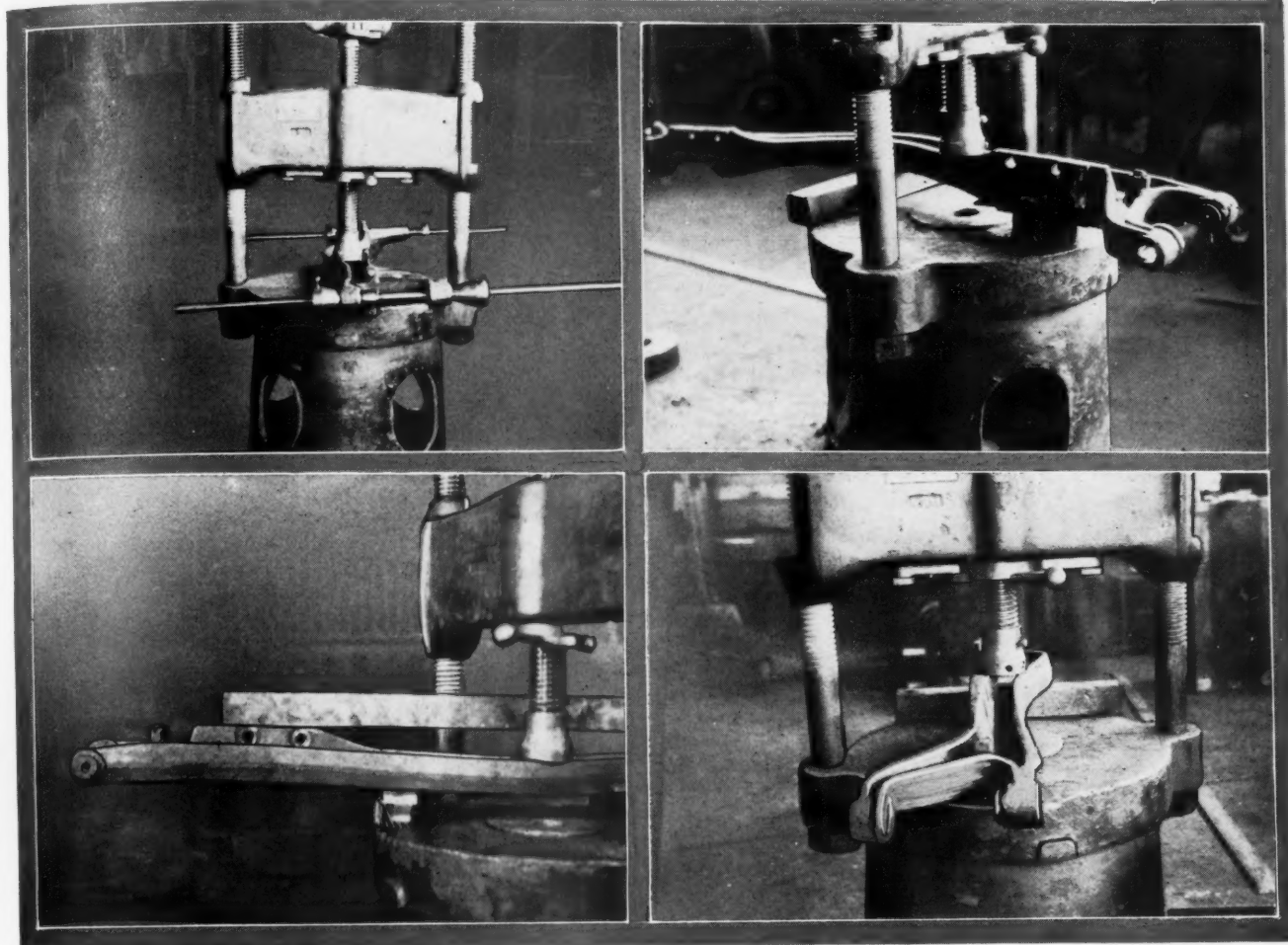


Fig. 1. Top Left: Bars in yokes test twist and camber

Fig. 2. Bottom Left: Alignment is tested by straight edge

Fig. 3. Top Right: Bend being removed by press

Fig. 4. Bottom Right: Axle in position for removing twist

twist extends throughout several inches of length of the axle while in others the total amount of twist is concentrated in a narrow area. In either case the extent of the *untwisted* section must be determined.

Removing Twist

To remove twist the axle is clamped on the bed of the press at a point within, but near the end of, the untwisted portion, Fig. 4. Pressure is applied by means of a long bar placed through the yoke, under one arm of the yoke and over the other. The axle should be so placed that movement of the end of the bar downward will provide pressure in the required direction. Two men will be required for this operation and in some cases three, and one of them should direct the others, as it is impossible for all to judge the amount of pressure necessary to twist the axle back into position. Best results will be obtained by having a mechanic sight the axle and signal to the men on the end of the bar how much to pull.

Removal of twist will probably upset the alignment of the section of the axle between spring pads, particularly when the axle has been displaced upward and backward on one side in a combination twist and bend. The amount of bend remaining after twist has been removed should be slight and easily corrected. This operation is followed by a second check on twist and the removal of any found.

Bends in axles which are caused by traffic mishaps are usually in a horizontal direction along the axis of the axle and are caused by displacement of one or both yokes backward and bends of this type are removed first in the manner mentioned above. However it is possible for the axle to be bent by the yoke being displaced upward or downward. A bend in this direction affects the camber of the front wheels

and therefore should be very carefully checked during all straightening operations.

Check of camber is made by measuring the distance between the rods which are placed through the axle yokes in place of the king pins or axle yoke pins. The front wheels are usually closer together at the bottom than at the top and this condition is denoted by the term *camber*. The inclination of the wheels may be brought about by an inclination of the axle yoke pins or by the angle of the steering knuckle spindle. In order to check the alignment of an axle it is therefore necessary to know the dimensions of a standard axle. The measurement is made from the top of the bar through one yoke to the top of the bar through the other yoke and from the bottom of one bar to the bottom of the other bar. The bars should be placed in the same relative position in each yoke with approximately the same length extending above and below the axle yoke.

Correcting Camber

Correction of camber when due to misalignment of the axle is made on the press as in the case of other bends. The axle is placed either right side up or upside down and is supported at the spring pads unless the bend is known to be of shorter radius between these points. Camber must be held within close limits and much care must be exercised in applying pressure at this time to avoid the need of bending the axle back and forth to reach the desired alignment.

Axles can be straightened in the manner described in about an hour and a half by two men, the actual time depending upon the degree of misalignment. Acknowledgment is made of the cooperation of Mr. John Nidecker of the Brockway branch in Philadelphia in the preparation of this article.

It's a Merry Race!

Jobber Salesmen's Popularity Contest
is Chiefly Interesting in the Fact

*That Automotive Dealers the Country 'Round
Are Contesting so Enthusiastically*

For Their Favorite Wholesale Salesmen

In this issue, and on this page you will find a four-vote coupon in the *Motor World Wholesale* contest for the 27 most popular wholesale automotive salesmen—three in each of the nine trading zones shown in the accompanying map.

Contest will close at noon on Saturday, October 15. Hence, there will be no coupon in next month's issue of *Commercial Car Journal*, and thereafter.

Make certain that the coupon herewith is put to good use. And if the coupons in your July and August issues were not clipped and filled in, may we suggest, in behalf of your best liked wholesale salesman, that you attend to the matter promptly.

Cash prizes aggregating \$2,075.00 are to be awarded to each zone—first, second and third—prizes of \$100.00, \$50.00 and \$25.00 respectively.

And then there will be a special prize of \$500.00 to the zone contender who receives more votes than any other candidate. Hence his part of the melon will be \$600.00

Because the vote is being generously split up—owing to the large number of electors and candidates—it is anybody's race at this writing. Hence your votes may be a deciding factor.

Clip and fill them in. Send them to the contest editor of *Motor World Wholesale*.



The nine zones in which votes are being cast

The Nov. 10 issue of *Motor World Wholesale*—ANNUAL MARKETING NUMBER—will announce the 27 successful candidates. Reproduced photographs in *Motor World Wholesale* will give the industry and trade a "close-up" of these popular wholesale effectives. Awards will be made to the 27 successful candidates in Chicago during the A.E.A. Show—Nov. 7 to 12.

Any dealer is qualified to vote. Use the accompanying coupon at once.

MOTOR WORLD WHOLESALE Popularity Contest for Wholesale Automotive Salesmen

Contest Editor
Motor World Wholesale
Chestnut and 56th Sts., Philadelphia

In the wholesale automotive salesmen's popularity and efficiency contest I vote for:

Name of salesman

Name of his firm

His firm's address

Your signature

Your firm name

Address

C. C. J., Sept. 20—This ballot is for FOUR votes.

Commercial Car Journal

Flat Rate Price List

Main and Rod Bearings, Crankshaft and Camshaft

Definitions of Repair Operations

MAIN AND ROD BEARINGS

1. Adjust all main bearings after oil pan has been removed.
2. Renew all main and rod bearings, cast-in exchange type, after engine has been removed.
3. Renew all main and rod bearings, slip-in type, after engine has been removed.
4. Renew all main bearings and take up connecting rod bearings after engine has been removed.
5. Renew all main bearings and take up rods (removal of engine to be included in this price).

CRANKSHAFT

1. Install new crankshaft and new main bearings and adjust connecting rods (removal of engine to be included in this price).
2. Crankshaft end play adjust after oil pan and/or front cover have been removed.

CAMSHAFT

1. Remove and reinstall or install new after cover has been removed.
2. Renew all bearings after No. 1 above.
3. Front bearing renew after timing case cover has been removed.

	Main and Rod Bearings					Crankshaft		Camshaft		
	1	2	3	4	5	1	2	1	2	3
Brockway R & T	\$9.00	\$45.00	\$45.00	\$30.00	\$75.00	\$45.00	\$4.50	\$37.50		
Brockway SK	9.00	45.00	45.00	30.00	75.00	45.00	4.50	37.50		
Chevrolet 1 ton	2.75			18.00	27.00	27.00		6.00		
Dodge Bros. 3 brg.	3.00		24.50	19.25	31.25	31.75	3.25	6.75	15.00	
Dodge Bros. 5 brg.	6.00		25.50	20.75	37.75	40.00	3.25	6.75	15.00	
Ford 1 ton	(a) 5.10	12.00		9.50	14.50	15.00		2.00		
F.W.D.	3.75		30.00	22.50	30.00	27.00	7.50	(c) 9.00	9.00	2.25
Garford 100-80	4.50	27.00	54.00	31.50	40.50	46.50		3.00	10.50	3.00
Garford 50-30-20	3.00	21.00	45.00	24.00	31.50	36.00		2.25	10.50	3.00
G.M.C. T-20	4.10	71.00		61.00	71.75	73.00		5.00	4.80	
G.M.C. T-40 & T-50	4.10	71.00		61.00	71.75	73.00		5.00	4.80	
Graham Bros. 4 cyl.	6.00		25.50	20.75	37.75	40.00	3.25	6.75	15.00	
Inter. Harvester S-24	3.00					29.25	4.50	2.75	5.00	1.25
Inter. Harvester S-26	4.75					31.25	4.50	3.00	6.25	1.25
Mack AB	4.80		25.50	19.20	56.70	58.20			10.20	2.70
Mack AC	4.80		25.50	19.20	91.20	91.20			13.35	11.10
Pierce-Arrow X	6.00						1.50			
Pierce-Arrow W & R	6.00						1.50			
Pontiac	5.75	16.50				(b) 20.50		2.50		
Reo T-6	6.00	84.00		79.00	96.00	96.00		6.00	3.00	1.00
Star Four	2.10	30.90		24.60	29.50	29.60				1.25
Stewart Buddy	7.00	60.00		51.00	75.00	76.00	2.00	8.75		
Studebaker 3/4 ton	10.70	63.50		63.50	87.50	87.50	6.60	5.40		3.55

(a) Trucks with new style crankcase only.

(b) Includes price of installing new rod bearings.

(c) Includes R & R engine.

New Truck Models of the Month

Whippet

TWO light delivery series with seven different body styles mark the entry of Willys-Overland, Inc., into the light commercial field. They are standard, four-cylinder Whippet chassis equipped with four-wheel brakes and ranging in price from \$625 to \$710, depending on the style of the body.

The first series includes four body types known as the De Luxe delivery series and has a rated load capacity of 700 lb. Prices complete are:

Panel delivery	\$685
Open express	665
Canopy top express, with curtains....	670
Canopy top express, with screens.....	710

The second series, known as the Commercial Roadster series, is designed for the smaller merchant and the traveling salesman and includes three body styles. A feature of this series is the ease with which the regular Commercial Roadster with sample compartment can be converted into two different styles of delivery car with slip-on bodies. Prices complete with bodies are:

Sample compartment type	\$625
Open pick-up type	645
Closed panel type	665

The front compartment of the second series is upholstered with Spanish leather and, in many respects, is similar to the company's Collegiate Roadster with rumble seat.

Steel forged braces are employed at all connecting points in the De Luxe bodies. The panels formed of three-ply wood and coated with waterproof glue are cemented to rust-proof coverings. Where wooden frames are exposed they are metal covered.

A single upholstered, folding and adjustable driver's seat is standard but an extra seat can be obtained at an extra cost of \$9.

The two rear doors of the panel delivery are 45 in. high and are equipped with a rotary lock which draws the

doors closely together and operates two vertical rods for securing them at the top and bottom. The sides in the interior are fitted with hardwood slats and the floors with metal runners. The roof is curved to form a sun visor over the one-piece windshield. The rear is protected by two bumperettes. The body is 62 in. long, 43¼ in. wide and 48 in. high.

The same principles of body construction are used on the slip-on bodies. Inside dimensions of the open slip-on body are 56 in. long by 38 in. wide with 8 in. flare boards. The closed panel models are 44¾ in. long, 39¾ in. and 24 in. high at the center. Spare tires are carried so as not to interfere in any way with access to the body.

Walter

IN announcing the new 1928 series of Walter Snow Fighters, the Walter Motor Truck Co. calls particular attention to changes in the engine and clutch.

The crankshafts of the six cylinder, 100 hp. engines have been increased to 3½ in. diameter and the crank cases have been deepened and stiffened. Together with improved manifolding smoother operation at high engine speed and increased torque is claimed. The oil pump capacity has been increased and a larger screen is provided to prevent congealing at this point in cold weather.

The clutch is now a large single plate type with twelve direct acting springs and otherwise designed for maximum ventilation. These changes are considered very essential in view of the severe duty to which clutches are subjected in snow-fighting service. Another feature of the clutch is a heavy presser plate, which permits easy engagement and considerable slippage without burning the facings.

Improved appearance and comfort for the driver is provided in a new radiator, hood and coupe type of cab.

The reversible plow has also been changed to more effectively turn over deep wind rows or snow banks.

Pneumatic tires are recommended for all interurban work and hollow type cushion tires in city work where traffic conditions do not permit high speeds.

Stewart

WHILE designed for general commercial use the new Stewart Model 18X, 2-2½-ton truck is also recommended for specialty work, such as bus service, long distance carting, fire department work, etc. The principal features of this new model are its six-cylinder engine, wide tread bus type full-floating Timken worm axle, four-wheel brakes, wide springs and low frame height.

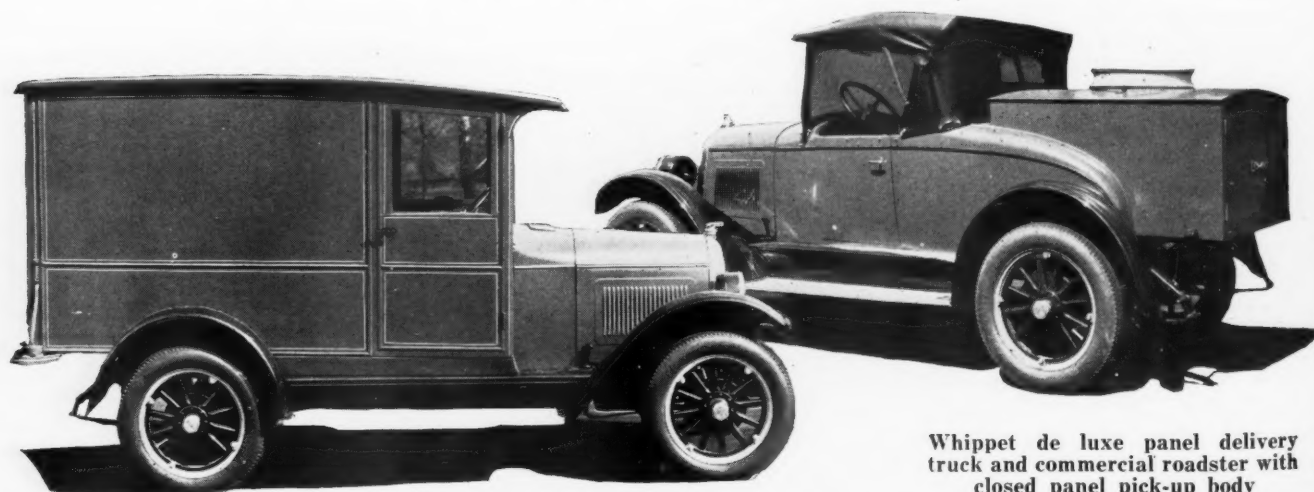
With standard wheelbase of 165 in. the list price is \$2,490. The special 190-in. wheelbase lists at \$100 extra.

The 3¼ in. x 5 in. six-cylinder engine is mounted in unit and suspended from three points. Both head and block are removable. Lubrication is full force feed with automatic control for all engine speeds. The connecting rods are rifle drilled for piston pin oiling and the valve stems and tappets are automatically lubricated.

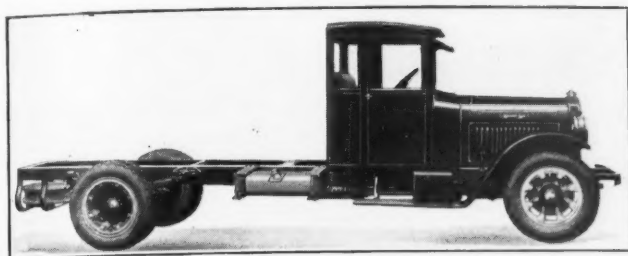
Cooling is provided by water pump circulation. The system also includes a thermostat, 20-in. steel fan and a cast tank radiator with vertical tube core.

Starting, lighting and ignition is by Remy-Delco. Carburetion is furnished by a Stromberg equipped with gasoline filter and air cleaner. The carburetor is fed by Stew-vacuum from a 20-gal. tank mounted on the side.

From the engine power is carried through a dry-plate multiple-disk clutch, automatically adjusted for wear



Whippet de luxe panel delivery truck and commercial roadster with closed panel pick-up body



Stewart Model 18X for general commercial use

to a three-speed transmission with reverse. A four-speed transmission is furnished at an extra cost of \$50. The two-piece propeller shaft is of two-inch tubular section equipped with three metal covered oil tight joints. The Timken worm rear provides a final reduction of $7\frac{1}{4}$ to 1 standard. The heavy drop forged I-beam front axle is designed with a ball thrust bearing on king pins for easy steering. Front tread is 60 in.

The $7\frac{1}{2}$ -in. depth carbon heat-treated steel frame is supported by four semi-elliptic alloy steel springs, bronze bushed throughout. The front springs are 40 in. long by 3 in. wide with nine leaves and the rear are 50 in. long by 3 in. wide with 14 leaves. This model may also be obtained with underslung rear springs at \$50 extra.

Mechanically operated Bendix four-wheel service brakes act on $16 \times 2\frac{1}{2}$ in. drums in the front and $17\frac{1}{4} \times 3$ in. drums in the rear. A hand brake for parking acts on a drum 4 in. wide mounted on the rear of the transmission. A low ratio Ross cam and lever type gear is used for steering.

Wheels are cast steel hollow spoke type standardly equipped with 32×6 in. pneumatics throughout, including dual rears. Solid tires and single pneumatic rears may be obtained if desired, the latter at extra cost.

Model 18 is standardly equipped and is furnished in two wheelbases, 165 in. standard and 190 in. special at extra cost.

Gramm-Bernstein

THE new $2\frac{1}{2}$ -3-ton Gramm-Bernstein Model C truck, recently placed on the market, is furnished with a six-cylinder engine as standard, but so designed to accommodate a four if desired. It is designed in four wheelbases, two for each engine size. The six is furnished in 150 in. and 172 in. sizes; the four in 144 in. and 166 in. With a chassis weight of 6000 lb., body weight allowance of 1500 lb., the payload capacity is specified at 6000 lb. Both engines are of the L-head type with removable cylinder heads and blocks. The bore and stroke of the six is $3\frac{3}{4} \times 5$ in.; and the four, $4\frac{1}{4} \times 5\frac{1}{4}$ in.

Oiling is force feed, the system including a gear pump and oil pressure adjustment at the front of the engine on the crankcase. The cooling system

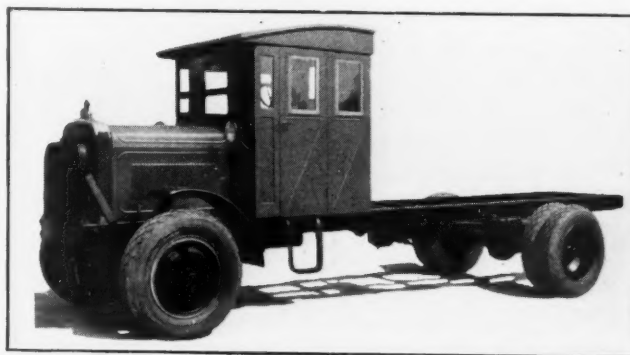
includes a centrifugal pump, 20-in. fan and a spring and cushion mounted radiator. The radiator core is of the removable fin and tube type. Gasoline is fed by vacuum from a 25-gal. tank mounted under the driver's seat to a hot-spot manifolded carburetor fitted with an air cleaner. Ignition is by a high tension magneto with impulse starter.

In the power line is a 16-plate multiple disk, auxiliary transmission, with 2.9 reduction feature, and a four-speed over drive amidships transmission, which provides direct on third. This construction gives eight speeds forward and two reverse. Two tubular propeller shafts with disk type universal in front and metal in the rear transmit the power to the rear axle

which is of the full-floating, worm-drive type, providing a final gear reduction of 7.75 to 1.

The braking system consists of a propeller shaft service brake of Gramm-Bernstein design and an internal type emergency brake on the rear wheels. The spoke metal wheels are standardly equipped with 36×4 in. solid tires front, and 36×4 in. dual in the rear. Pneumatic equipment fitted on Budd disk wheels may be obtained if desired, 34×7 in. front and 34×7 in. dual rear. Equipped with solid tires the speed of this model is rated at 40 m.p.h., with engine speed governed at 2050 revolutions per minute.

A closed cab is included in the standard equipment.



Gramm-Bernstein Model C $2\frac{1}{2}$ to 3-ton six-cylinder truck

Engineers Improve in Latest Bus Models

(Continued from page 14)

and the average chassis weight is 7200 lb. Complete with body the various models average 10,700 lb. Only six-cylinder engines and four-speed transmissions appear in this group. There is an equal division between the double reduction and worm types of final drive. Tires are pneumatic except in one case.

Five double deckers are included in the next group with an average wheelbase of 213 cu. in. The various chassis average 8120 lb. in weight and with body, 15,000 lb. All models but one in this group have six-cylinder engines. Average piston displacement is 467 cu. in. and, with one exception, four-speed transmissions are used and the same is true of the worm drive. Only two models in this class have pneumatic tires.

Floor heights apparently bear no relation to size as the lowest average floor height for any group is 25 in. for the 33-35-passenger class, while the highest average is 26.2 for the 25-27-passenger classification. The range of floor height is 21 to 30 in. Similarly in the matter of turning radii, there does not seem to be any relation between this dimension and wheelbase, as might be expected although, of course, the type of service for which the vehicle is designed affects this factor. The shortest turning radius reported is 26.5 ft. for a 175-in. wheelbase chassis. Another

model with 2 in. less wheelbase has a turning radius of 32 ft. On the other hand, a 225-in. job has a turning radius of 27.5 while another model of 227 in. requires a radius of 41.5 ft. to turn. On the foregoing it is evident that there is little relation between turning radius and wheelbase.

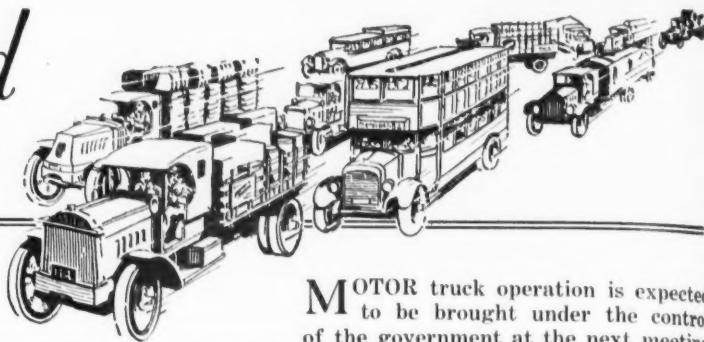
Whitney Valve Tool Set

R. S. Whitney Mfg. Co.
150 Turner St., Auburn, Maine

THIS valve tool set consists of a universal cutter, $1\frac{1}{4}$ to $2\frac{1}{4}$ in. 45 degree and four demountable stems and a master head and stem for Ford and Fordson engines. Twelve valve seat roughing disks are supplied. The set is sold with compact metal case at a list price of \$12.75, east of the Rockies.



Have You Heard That ~



THE annual national automotive transportation and service meeting of the Society of Automotive Engineers will be held in Chicago at Hotel Sherman on October 25 to 27. Six technical sessions will be held at that time. Representatives attending will be offered an opportunity to inspect the manufacturing, maintenance and operating methods at the plants or service stations of the Yellow Truck & Coach Mfg. Co., Marshall Field & Co., The Chicago Motor Coach Co., the Arthur Dixon Transfer Co., the Underwriters' Laboratories and the Sprague-Warner Co.

Edward M. P. Murphy, recently elected president of the Kelly-Springfield Truck & Bus Corp., Springfield, Ohio, made the statement, after a study of the company's prospects and financial condition, that whether the company continues to operate independently in business or disposes of its business to other interests is a matter of policy which is being considered. Every effort is being made to continue the business in that city. Mr. Murphy further explained that the company is in sound liquid condition.

ADAILY output of 25,000 tires by the Ford Motor Co. is seen as part of its new car program. Recent developments indicate that the manufacturing space made available in the Highland Park plant of the Ford Co. through the removal of certain parts department to Fordson is one of the factors responsible for the new move. Large scale production will also be conducted in the battery department and upholstery materials division.

F. T. McRae, Jr., president, National Motors Mfg. Co., Irvington, N. J., reports that its sales of trucks during the first six months of the year exceeded the sales for the same period last year by 50 per cent.

AMETHOD of eliminating reflections on bus windshields, which hitherto have interfered with operation at night, is the result of tests made by the General Electric Co. on buses of the Public Service Corporation of New Jersey. It was found that by tilting the windshield forward from bottom to top and painting the ceiling over the driver's seat black virtually all windshield reflections from brightly lighted interiors could be eliminated.

Reo's "Half Million Dollar" Club Grows

MEMBERSHIP to Reo Motor Car Company's recently organized "Half Million Dollar" club is open to every commercial vehicle salesman bringing in a half million dollars worth of business to his company solely through his own efforts. The present membership includes:

W. C. Blair, Boston, \$1,500,000; James Denvir, New York, \$1,250,000; Albert A. Schaller, Toledo, \$764,198; R. N. Crawford, Baltimore, \$566,208; John Walker, Newark, N. J., \$690,000; W. C. Moore, Minneapolis, \$799,800; E. H. Cushman, Portland, Me., \$525,565; E. C. Gavitt, Wichita, \$500,000 and W. C. Elliott, Boston, \$500,000.

The Bendix Brake Co. has acquired rights covering the brake development evolved by the Leland-Gifford Co., Worcester, Mass. Leland-Gifford engineers have done a great deal of work on a self-energizing type of brake, which is something like the Bendix brake and developed to a useful degree hydraulic, flexible cable and other controls, all of which fit directly into the Bendix research program.

DEFINITE speed limits have been eliminated by Michigan's new traffic code which took effect early in September. A Reckless Driving Act will regulate traffic in this state in the future. The new law, however, still limits the speed of trucks. Low speed driving has been relegated to side roads.

MOTOR truck operation is expected to be brought under the control of the government at the next meeting of the Quebec Legislature. The Quebec Public Service Commission already has authority over buses and requires all operators to file a schedule of departures and arrivals and a fixed scale of charges. Similar authority for the control of commercial vehicles is expected to be vested in the Commission. Truck taxation also will be studied at the next sessions with a view of requiring truck operators to contribute a greater share toward road maintenance and more in proportion to the value derived from them.

Alfred Bartsch has been named a regional sales manager in the organization of the General Motors Export Co. Pending assignment to territory, he will take up his new duties at the export company's New York headquarters. Mr. Bartsch was formerly general sales manager of American Bosch Magneto Corp. His connection with Bosch has covered almost 20 years, having been connected with the original Bosch Co. since 1910.

IN California 500 schools are being served by 1600 buses. These cover a total distance of 960 miles each day, carry 50,000 children daily and cost approximately \$1,500,000 for operation and up-keep during the school year, according to the Motor Carriers' Association of California. It is estimated that this number will be increased by at least 30 per cent September, 1928.

Prof. Arthur H. Blanchard, head of the Highway Engineering & High Transport Department of the University of Michigan, has tendered his resignation on account of health. Prof. Blanchard has become widely known throughout the automotive industry through the work which he conducted at the University.

MANUFACTURERS were notified and invited to exhibit at the National Automobile Shows of 1928, to be held at the Grand Central Palace, New York, Jan. 7-14, and the Coliseum, Chicago, Jan 27-Feb. 4, early in September by the National Automobile Chamber of Commerce and the Motor and Accessory Manufacturers Association. The commercial vehicle sections will be arranged again as well as the service equipment sections. The shop equipment sections will be closed to the public until



Showing the Linn tractor, acquired recently by the Republic Motor Truck Co., Inc., and which will be sold through the Republic organization

5 p.m. instead of 3 p.m. as was the case last year thereby affording visiting dealers a greater opportunity and more time for following up working demonstrations of machinery and tools on exhibit.



Part of the fleet of 27 Indiana Road Builder models recently ordered by the Indiana State Highway Commission. This addition increases the fleet of the Indiana Commission to 77 Indiana trucks

Sales of light trucks in Minneapolis are in excess for the last four months of this year as against the same period of last year but heavy truck sales have fallen somewhat below last year's level.

Total sales value of tires and tire products manufactured in the United States in the second quarter of 1927 was \$211,948,000 against \$237,936,000 in the corresponding period in 1926, according to the Rubber Assn. of America, Inc. For the first half the total sales values of these products was \$399,598,000 against \$418,769,000 in the first six months of 1926.

INDIANA TRUCK CORP., has established a new factory branch in Tulsa, Okla., in view of the sales progress achieved in the oil fields of that section. Paul R. McMahan, manager of the Dallas branch, will supervise the new branch, with L. A. Murdock in direct charge.

George E. Smith, Pacific Coast representative of the Pierce-Arrow Motor Car Co., died in Los Angeles. Mr. Smith has been with Pierce-Arrow for a number years and was well known in the industry.

NORTH EAST 6-volt electrical equipment is used on the new two-ton 6-cylinder Graham Brothers truck. It consists of the generator, starting motor, timer-distributor, ignition coil and motor driven horn.

Z. F. Graham, father of the three Graham brothers, now in control of Palge-Detroit Motor Car Co., died recently of heart disease.

WHILE the national picture of automotive conditions is somewhat irregular future prospects are considered favorable, according to a survey of the automotive trade just released by R. G. Dun & Co. In Boston sales of trucks have declined 12½ per cent for the six months of the year over the same period last year. Buses have increased in number. Sales of commercial cars in Buffalo are holding up well and, in some instances, are ahead of those for the same period last year. Syracuse reports that bus manufacturers are heavily loaded with orders and are operating at capacity. Baltimore distributors anticipate many replacements in fall. One and two ton trucks are selling well, and heavier trucks are moving more freely than they were earlier in the season. Truck and bus business in St. Louis is reported relatively more satisfactory than passenger car business. While sales of trucks continue about normal in Dallas, the general conservatism in buying is also apparent in this branch of automotive business. In Detroit truck and bus sales have been fairly steady throughout the year, with a net gain of 4 per cent for the first six months of this year against the same period in 1926. Motor truck activities in Toledo have been reported good with some increases in orders.

C. H. Munson, export manager of North East Service, Inc., has embarked for an extensive trip to the Far East to increase North East sales and service facilities in the territory. Mr. Munson will visit Hawaii, Japan, the Philippines, Australia, New Zealand, India, Ceylon, Burma, Dutch East Indies and the Straits Settlements.

FACTORY shipments of the Indiana Truck Corp. for July increased 44 per cent over July a year ago. This is in line with the increases reported for June and May over the corresponding months in 1926; they were 33 per cent and 44 per cent.

H. D. Freeland has resigned as manager of the metallurgical department of Bower Roller Bearing Co., Detroit, to become chief metallurgist of the Federal Bearings Co., Inc., Poughkeepsie, N. Y.

ABLIND drawing will be held at N. S. P. A. headquarters in Detroit, September 30, for space allotment for the National Standard Parts Association Show at Cleveland, November 14-18.

John N. Dundon, assistant works manager of Pierce-Arrow Motor Car Co., recently died of heart trouble. Mr. Dundon was 48 and had been employed by Pierce-Arrow for 20 years.

General business conditions are moderately good although suffering somewhat by comparison with the record-breaking levels of a year ago. Whereas, there are factors that might account for the smaller sales of heavy duty trucks, there is no apparent reason why the lighter duty vehicles ought not to be selling at least as well as last year.

Distribution of commodities is very nearly up to last year's mark, as shown by such inventories as chain store sales and freight car loadings. Although car loadings have been running slightly below 1926, this is largely accounted for by reduced shipments of bituminous coal.

Easy money and the absence of any unusual accumulation of stocks

Business Moderately Good

continue to form the bulwark of industrial prosperity. Employment is slightly under last year's levels, due probably to the lower rate of operations in steel and automobiles and perhaps also in building.

The building situation is of considerable interest to the truck industry and presents a somewhat variable current condition. Building permits issued at reporting cities in the first seven months of the year showed a decline of 10.2 per cent under the corresponding period of 1926.

As offsetting this to some extent,

the statistics of contracts awarded have been well up to the figure of a year ago. This result is arrived at because there is included in contracts awarded, besides actual building operations, the construction of roads, subways, bridges and other engineering work. These, however, do not give to general business the support in wide employment and consumption of many materials which actual building construction furnishes.

In actual building operations, therefore, it would appear that activities are tending downward, although a real slump or depression is by no means indicated. Road building is indicated as a strong source of demand for heavy duty vehicles.

DEFINITE steps will be taken to rehabilitate the standing of truck paper at the annual meeting of the National Association of Finance Companies, Nov. 15, according to C. C. Hanch, general manager of the association in a talk before members of Motor Truck Industries, Inc., Sept. 13. He said appreciable gains have been made in reducing the amount of instalment paper from transactions involving less than standard down payments. Not more than five per cent of total volume represents sub-standard paper transactions today compared with nine per cent in 1926 and 19 per cent in 1925, in the opinion of Mr. Hanch.

The truck association discussed the advisability of member companies arranging to interchange credit information and engaging a secretary to carry on this work. The Autocar Company and Standard Truck Company were welcomed into membership. Future meetings in Pittsburgh and St. Louis are planned.

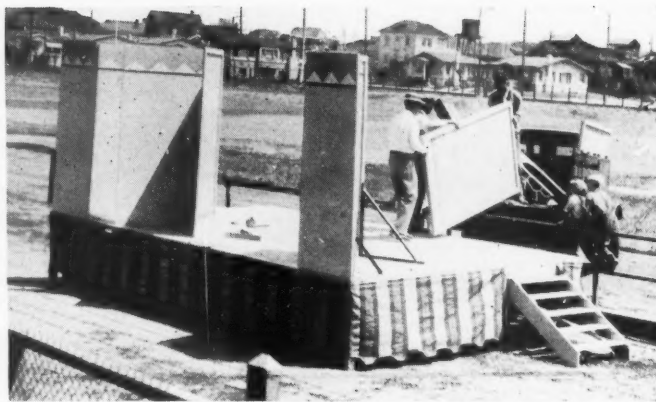
J. Howard Pile has been appointed sales manager of Smith & Gregory, of New York City, distributors of Balcrank bumpers, Cox shock absorbers, Vernay radiator shutters, Gruss & Westinghouse air springs, and other lines. Mr. Pile was formerly connected with the New York branch of United Motors Service and prior to that was technical editor of Motor World.

THE Pontiac Six De Luxe delivery truck will in the future be sold and serviced by General Motors truck branches, distributors and dealers, under the name of the General Motors De Luxe delivery, according to P. W. Seiler, president of the General Motors Truck Co., and A. R. Glancy, president of the Oakland-Pontiac Motor Car Co. The purpose of the change, according to the statement, is to give the General Motors Truck Co. a complete line of trucks to meet every user's need.

Frank B. Nostrand, district manager of the New York Autocar Sales and Service Company, died recently. Mr. Nostrand was with the Autocar for a number of years and was well known in automotive circles throughout the country.

THE United Soviet Socialist Republic of Russia has standardized with Ustcographs on all its motor trucks purchased from American manufacturers, according to a report received from the United States Recording Instruments Corp.

Coach and bus competition is beginning to make itself felt in Great Britain and in Hungary State and privately owned railways have entered this field of transportation to accommodate the public demand, according to reports received by the Department of Commerce.



Setting the stage of a traveling theatre conducted under the auspices of the City of Oakland in carrying dramatics to school children. The truck carries the equipment and the trailer folds out, forming the stage. The itinerary covers 52 points along the Pacific Coast

Coming Events

SHOWS

- American Electric Railway Association, Public Auditorium, Cleveland, Oct. 1-7
- Automotive Equipment Association, Coliseum, Chicago, Nov. 7-12
- Brooklyn, Brooklyn Motor Vehicle Dealers Ass'n, 23rd Regiment Armory, Jan. 21-28
- *Chicago, National Automobile Chamber of Commerce, Coliseum, Jan. 28-Feb. 4
- *Cincinnati, Music Hall, Jan. 14-21
- *Cleveland, Public Auditorium, Jan. 21-28
- *Dallas, Texas, Automobile Building, Oct. 8-23
- Denver, Auditorium, Feb. 27-March 3
- Detroit, Convention Hall, Jan. 21-28
- Indianapolis, Auto Show Bldg., Feb. 13-18
- *Kansas City, Mo., American Royal Bldg., Feb. 11-18
- *Milwaukee, Auditorium, Jan. 14-21
- Minneapolis, Municipal Auditorium, Feb. 4-11
- National Standard Parts Association, Convention Hall, Cleveland, Nov. 14-18
- *New York, National Automobile Chamber of Commerce, Grand Central Palace, Jan. 7-14
- *San Francisco, Civic Auditorium, Jan. 28-Feb. 4
- *St. Louis, City Market Bldg., Feb. 20-25
- Syracuse, State Armory, Feb. 6-11

* Will have Special Shop Equipment Exhibit.

CONVENTIONS

- American Electric Railway Association, Public Auditorium, Cleveland, Oct. 3-7
- Automotive Equipment Association, Coliseum, Chicago, Nov. 7-12
- National Association of Finance Companies, Congress Hotel, Chicago, Nov. 14-15
- National Battery Manufacturers Association, Hotel Niagara, Niagara Falls, Sept. 29-30
- National Standard Parts Association, Hotel Hollenden, Cleveland, Nov. 14-18
- National Tire Dealers Association, Brown Hotel, Louisville, Ky., Nov. 15-17
- United States Good Roads Association and Bankhead National Highway Association, Des Moines, May 28-June 1
- N. A. D. A.**
Chicago, Jan. 31-Feb. 2—Annual, Palmer House.
Chicago, Feb. 1—Banquet, Palmer House.
New York, Jan. 9-10—Eastern District, Hotel Commodore.
- S. A. E.**
Chicago, Oct. 25-27—National Transportation and Service Meeting, Hotel Sherman.
Detroit, Jan. 24-27—Annual Meeting.
New York, Jan. 12—Annual Dinner.

COMING FEATURES OF CHILTON CLASS JOURNAL PUBLICATIONS

- Oct. 1—Production and Factory Equipment Issue—Automotive Industries.
- Nov. 10—Marketing Annual—Motor World Wholesale.

Commercial Car Specifications on page 35

THE majority stock control of the Lycoming Manufacturing Co., Williamsport, Pa., has been acquired by the Auburn Automobile, according to an announcement made by E. L. Cord, president of Auburn. Stock control of Duesenberg, Inc., Indianapolis and the Limousine Body Co., Kalamazoo, was acquired by the Auburn company at the same time. All three companies will retain their individual identity and present management.

A NEW Ford truck, embodying the same principles of engine and chassis design as the new Ford passenger car will be introduced early in the fall according to announcement by the Ford Motor Co.

The new truck, the statement says, will replace the present Model T Ford truck. It will have double the horsepower of the present model and will be equipped with improved coiling and ignition systems and new steering and transmission mechanisms. Replacements for the Model T trucks now in operation will be produced until demand for such parts ceases.

Fred C. Balthaser, Detroit, has been appointed show manager of the 1927 National Standard Parts Association Show to be held in Cleveland, November 14-18. He replaces John Servas, who resigned because of anticipated pressure of business during November.

AUTOMOTIVE parts and accessory business, which declined to a low level with the rest of the industry in July, has been on a steady upward trend in August, according to the Motor and Accessory Mfrs. Association. Reports from production centers indicated that August was one of the best months of the year, and that September would not be far behind.

William G. Norris has been appointed to the Corporation Sales Division of the Diamond T Motor Car Co. Mr. Norris is widely known especially among manufacturers because of his representation in western territory for Timken-Detroit Axle Co.

ATWO-DAY conference between the officials of the Republic Motor Truck, Inc., and the Linn Mfg. Corp., which company became a division of the Republic as a result of its recent purchase, was recently completed for the purpose of developing plans for the immediate expansion of a program for the sale of Linn tractors.

Racine Radiator Company, Racine, Wis., reports an increase of 37 per cent in business for the first six months of 1927 against the same period in 1926. The company manufactures heavy duty radiators for automotive and industrial engines.

BETHLEHEM

Rolled Steel Truck Wheels

Bethlehem Rolled Steel Truck Wheels possess qualities merited by careful design and manufacture, and proven by long, hard service.



*Sesqui-Centennial
Gold Medal Award*



Bethlehem Rolled Steel Truck Wheels were awarded a Gold Medal at the Sesqui-Centennial Exposition, Philadelphia — another recognition of the excellent qualities embodied in the products manufactured by Bethlehem Steel Company.

BETHLEHEM STEEL COMPANY—BETHLEHEM, PA.

District Offices:

New York Boston Philadelphia Baltimore Washington Atlanta Buffalo Pittsburgh
Cincinnati Chicago Cleveland Detroit St. Louis San Francisco Los Angeles Seattle Portland

Bethlehem Steel Export Corporation, 25 Broadway, New York City, Sole Exporter of our Commercial Products.

BETHLEHEM

What is Congress Going to Do?

(Continued from page 19)

other transportation agencies expressed the view as early as 1923 that although Federal regulation of common carrier motor transportation had not yet been adopted, it was believed to be desirable and necessary.

The attitude of the state public service commissions toward interstate regulation of carriers is crystallized in the Cummins-Parker Bill which was worked out and sponsored by the National Association of Railway and Utility Commissioners. This bill which failed to be reported out of committee in the sixty-ninth Congress is based upon the principle of the regulation of interstate highway transportation by the state regulatory commissions or by joint boards composed of the members of two or more state commissions acting as the deputy representatives in regulating interstate commerce of the Interstate Commerce Commission, and with the right of appeal to the Interstate Commerce Commission.

There has been much discussion raised by the proposal to regulate interstate commerce by state boards or by joint interstate boards. The constitutionality of such a procedure has been questioned, as it is claimed by some to involve the delegation of power to administer Federal legislation to state officers which is forbidden by the constitution. A delegation of this sort is not the delegation of Federal power to enact Federal legislation to state bodies, but the delegation of authority to determine facts and conditions and to apply the Federal law subject to independent action and appeal to the Federal regulating body.

A number of State Commissioners, including H. G. Wells of the Massachusetts Commission and Vice-President of the National Association of Railroad and Utility Commissioners, favor the Federal regulations of motor bus transportation which operates over fixed regular or between fixed termini as the first step because of the greater ease in applying a Federal law to such carriers and because of the willingness of such carriers to be regulated. The next step, the regulation of motor truck transportation and other carriers over the highways on irregular routes will be easier, in Mr. Wells' opinion, after the first and easier step is taken.

The Interstate Commerce Commission has said little but has heard much testimony and made searching investigations into interstate motor transportation. The commission, contrary to the opinion expressed by many, is not seeking to add to its already heavy burden of administrative and quasi-judicial work in investigating motor transportation. Chairman Esch of the commission is very emphatic upon this point. The commission is now preparing its report of the results of its survey of the field of motor transportation and its recommendations to Congress for

legislation which will probably be submitted soon after the opening of the next session of Congress. This report will undoubtedly be the opening gun in the campaign for Federal bus legislation.

The role of the prophet is a difficult one. The views of the leading interested bodies in motor regulation have been indicated to show the direction of the wind. Legislation in the future will depend to some extent upon the recommendations of the Interstate Commerce Commission with respect to certain fundamental questions of policy and to a certain extent upon expediency. Recent developments in the extension of the radius of activity of motor truck operations indicate that Congress, although it may provide different legislation for bus transportation and trucks, possibly will not regulate one without regulating the other.

The interests of the traveling shipping public are paramount and will be given first consideration. If the establishment of motor bus and truck lines, whether in competition with other carriers or otherwise, is in the interest of the public and for its convenience and necessity legislation should be enacted to permit and encourage the establishment of such lines. The effect of such lines upon other carriers is of minor importance compared with the interests of the public.

Stability Marks 1927 Bus Growth

(Continued from page 11)

electric railway companies operating 7777 buses over 16,334 miles of route. Of these companies 48 have substituted buses over their entire railway systems and are operating 252 motor vehicles over 437 miles of route. In addition there are more than 15 cities in which street cars have been abandoned. This makes a total of about 65 towns and cities, all under 100,000 population, in which buses have been substituted for entire trolley systems.

Steam railroads entering the bus operating list this year have been the Central Railroad of New Jersey, the Southern Pacific Railroad, and the Seaboard Air Line Railroad.

Other railroads which are preparing for extensive bus service as soon as permission is granted are the Pennsylvania and the Reading. The motor subsidiary of the Reading was recently granted a charter authorizing the operation of motor vehicles in Pennsylvania by the Public Service Commission of that state. As soon as the charter is approved by the governor the subsidiary will apply to the commission for authority to operate buses in 24 counties of Pennsylvania. The Pennsylvania Railroad is holding up its application for a bus charter pending the outcome of the Reading's application.

In mid-summer the Northern Pacific added 28 de luxe buses to its fleet of 129. These were placed in service between Portland and Pendleton, Oregon,

as substitutes for local train service and as competitors of motor bus companies traversing these same routes. Other railroads which have placed additional bus lines in operation are the Boston & Maine, the Atchison, Topeka & Santa Fe, and the New York, New Haven & Hartford.

There are now approximately 60 steam railroads, about half of which are Class I carriers, operating 822 buses over 7724 miles of route. Most of these railroads are operating buses in line service, about two-thirds of them to supplement train service and the rest to replace it.

These figures, together with frequent favorable comment by railroad officials, indicate how the older carriers are being converted to the use of highway vehicles.

One of the most important bus developments of the summer was the granting by the New York City Board of Estimate and Apportionment of three large franchises for bus operations in all five boroughs of that city. These franchises grant the right to operate 750 single and double deck buses representing an investment of \$9,800,000, over 85 routes covering 361 miles in the Bronx, Manhattan, Brooklyn, Queens and Staten Island. These operations, however, cannot be begun until the New York State Transit Commission has granted certificates of convenience and necessity for each of the routes covered by these franchises.

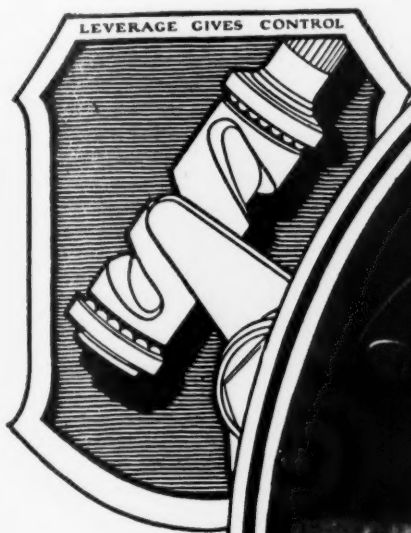
An important even from the bus operators' point of view was the holding of the first annual convention of the motor bus division of the A.A.A. in Philadelphia last June. This gathering brought together representatives of 22 state and district motor bus associations, as well as spokesmen for individual companies, those in attendance representing approximately 60 per cent of the 32,425 common carrier buses in the country.

This bus operators' organization has already brought out the first of a group of time tables with which they propose to cover operations of all lines in the country.

The motor bus division of the A.A.A. on August 1 took the first step toward inaugurating an elaborate statistical service by employing Frederick Seiver.

A uniform bus regulatory law and a national cooperative advertising campaign are also planned by the decision.

Among the developments which may be confidently expected during the remainder of the year are further consolidations of bus lines, erection of more up-to-date union bus terminals in large cities, and the further supplementing or displacement of rail lines, both steam and electric, by buses. A strong movement for Federal regulation of interstate motor buses may be expected when Congress meets toward the end of the year. The motor bus division of the A.A.A., with the increased membership anticipated during the next few months, should be in a good position to assist in many ways the further development of the bus operating industry.



"I CAN'T TAKE ALL THE CREDIT"

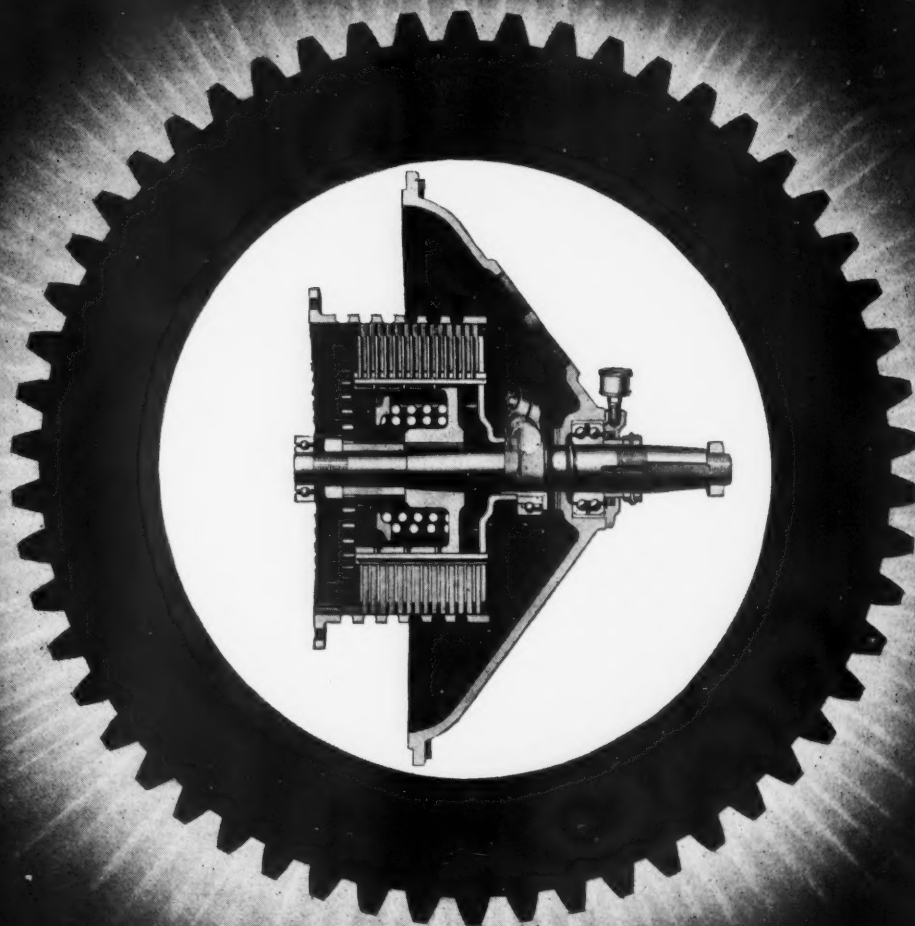
LATELY, this fellow's passengers have been telling him he's a darn good driver, but he says he doesn't deserve all the bouquets. His bus is equipped with Ross Cam and Lever Steering Gear. Steering is a lot easier with Ross . . . takes away the driving tension. Leaves the driver free to put all his energy and thought into his job. Good driver . . . he always was . . . Ross has simply made him a better one. Let us tell you the rest of the Ross story.

ROSS GEAR AND TOOL COMPANY . . . Lafayette, Indiana
Member Motor Truck Industries, Inc., of America

ROSS
CAM and LEVER STEERING GEARS



EASIER STEERING LESS ROAD SHOCK



IDEAL HEAVY DUTY CLUTCH

POWERFUL — More contact surface and power-transmitting ability than any other clutch of like depth.

QUIET — — Fibre discs eliminate metal-to-metal contact.

SMOOTH — Accurately cut teeth assure positive and smooth action.

SIZES AND CAPACITIES FOR ALL MOTOR VEHICLES

See this Fibre Disc Clutch and a full line of other units for trucks and busses, at Booth 439, A. E. R. A. Convention at Cleveland. Instructive motion pictures.



BROWN-LIPE GEAR COMPANY

World Leaders in Transmissions and Clutches

Commercial Car Specifications—Corrected Monthly

The Specifications, Chassis Prices, Etc., Are Corrected Each Month From Data Supplied Direct by the Makers. Gasoline Tractor-Trucks Will be Found at the End of Gasoline Commercial Cars

Those Chassis Which Are Sold and Recommended for Bus Use Are Designated in the Following Table by Reference Sign (\$) in Front of the Name

For Motor Bus Chassis See Pages 46 and 47

(Where prices are not given it is because we have been unable to get them from authoritative sources)

Key of abbreviations, page 48

Trade Name and Model	General			Engine						Electrical System		Clutch	Gearset		Rear Axle		Gear Ratios		Front Axle Make and Model	Springs (Make)	Steering Gear (Make)	Wheels (Make)	Rims (Make)	Chassis Weights (lbs.)								
	Standard Wheelbase (Inches)	Tire Size		Make and Model	Number of Cylinders	N.A.C.C. Rated H.P.	Valve Arrangement	Oiling System	Governor (Make)	Radiator (Make)	Fuel System		Ignition System (Make)	Generator and Starter (Make)	Type and Make	Make and Model	Location	No. of Forward Speeds							Universals (Make)	Make and Model	Final Drive	Type	Total Reduction in High	Total Reduction in Low	Brakes, Location	
		Front (Inches)	Rear (Inches)								Carburetor (Make)																					Fuel Feed
1000 Pounds																																
Chevrolet Cap. Com. Ch.	305 103	B 29x4 40	B 29x4 40	Own	4-3 1/2x4 1/2	21.7	21.7	H	PS	Non	Har	Car	V	A	Rem	Rem	P. B&B	Own	Own Cap.	Own	SS	Own	3.82	12.68	A	Own Cap.	SS	Own	Jax	Jax	1550	
G. M. C. De Luxe Del.	305 110	B 29x4 75	B 29x4 75	Pontiac	6-3 1/2x4 1/2	25.3	25.3	L	PC	Non	Har	Car	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	4.18	13.92	E	Own	SS	Own	Jax	Jax	1830	
Reo Speed Wagon Jr.	305 114	B 29x5 25	B 29x5 25	Con	4-3 3/4x4 1/2	18.2	18.2	L	PC	Non	Har	Car	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	4.18	13.92	E	Own	SS	Own	Jax	Jax	2295	
Star Four Com. Ch.	305 103	P 30x3 1/2	P 30x3 1/2	Con	4-3 3/4x4 1/2	18.2	18.2	L	PC	Non	Har	Car	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	4.37	16.16	A	Own	SS	Own	Jax	Jax	1500	
1500 Pounds																																
Graham Bros. DD	670 116	B 31x5 25	B 31x5 25	Dodge	4-3 1/2x4 1/2	24.0	24.0	L	SP	Non	McC	Sen	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	4.17	17.22	A	Dodge	Det	Ros	Kel	Kel	2170	
Int. Harvester Spec. Del.	116	B 30x5 25	B 30x5 25	Wau X	4-3 1/2x4 1/2	19.8	19.8	L	PC	Non	McC	Sen	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	4.45	17.22	A	Det	D-G	Ros	Kel	Kel	2000	
Kleber	1450 136	P 30x5 25	P 30x5 25	Con	6-2 1/2x4 1/2	19.8	19.8	L	PC	Non	McC	Sen	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	4.45	17.22	A	Det	D-G	Ros	Kel	Kel	2000	
Stewart Buddy	895 118	B 30x5 25	B 30x5 25	Own	6-2 1/2x4 1/2	19.8	19.8	L	PC	Non	McC	Sen	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	4.45	17.22	A	Det	D-G	Ros	Kel	Kel	2000	
Studebaker	113	B 30x5 25	B 30x5 25	Own	6-3 1/2x4 1/2	27.3	27.3	L	FP	Non	McC	Sen	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	4.6	30.0	E	Det	D-G	Ros	Kel	Kel	2250	
White 15	1545 133 1/2	P 34x5	P 34x5	Own GK	4-3 1/2x4 1/2	22.5	22.5	L	SP	Non	McC	Sen	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	4.6	30.0	E	Det	D-G	Ros	Kel	Kel	3227	
White 15 B	1545 133 1/2	P 30x5	P 30x5	Own GK	4-3 1/2x4 1/2	22.5	22.5	L	SP	Non	McC	Sen	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	4.6	30.0	E	Det	D-G	Ros	Kel	Kel	3242	
Yellow Cab Mod. T3	1205 109	P 29x4 1/2	P 29x4 1/2	Yell V	4-3 1/2x4 1/2	18.9	18.9	X	PS	Non	McC	Sen	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	4.90	16.3	B	Det	D-G	Ros	Kel	Kel	2500	
1 Ton																																
Acme 14	120	P 30x5	P 30x5	Con H8	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2000	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel	Kel	2100	
Acme 16	120	P 30x5	P 30x5	Con 20L	4-3 1/2x4 1/2	18.2	18.2	L	PC	Non	Per	Thr	V	A	Rem	Rem	P. B&B	Own	Own	Own	SS	Own	6.1	18.73	B	Det	D-G	Ros	Kel			

Trade Name and Model	General		Engine						Electrical System		Clutch	Gearset		Rear Axle		Gear Ratios		Brakes, Location	Front Axle Make and Model	Springs (Make)	Steering Gear (Make)	Wheels (Make)	Rims (Make)	Chassis Weight (lbs.)						
	Standard Wheelbase (Inches)	Tire Size	Make and Model	Bore and Stroke	N.A.C.C. Rated H.P.	Valve Arrangement	Oiling System	Governor (Make)	Radiator (Make)	Fuel System		Ignition System (Make)	Generator and Starter (Make)	Type and Make	Make and Model	Location	No. of Forward Speeds								Universal (Make)	Make and Model	Type	Total Reduction in High	Total Reduction in Low	
										Carburetor (Make)																				Fuel Feed
1 Ton—Cont'd																														
Indiana 11X.....	120	P 30x5	Her OX	4-4x5	25.6	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3300							
Indiana 61L.....	133	P 30x5	Con 11U	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3675							
Kenworth A.....	2280	P 30x5	Bud 20L	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3700							
Kiesel.....	161	P 30x5	Own 11U	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3780							
Larabee A3.....	140	P 34x5	Own 12C	6-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3800							
Le Moon H-10.....	130	P 30x5	Wau V	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3840							
Lietzhaus.....	140	P 30x5	Wau V	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3850							
Menominee.....	150	P 30x5	Wau V	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3850							
Nash 2018.....	160	P 30x5	Wau V	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3850							
Parker Chariot.....	1790	P 30x5	Wau V	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3850							
Reo FA.....	1940	P 30x5	Wau V	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3850							
Sandow GA.....	120	P 30x5	Wau V	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3850							
Schacht.....	132	P 30x5	Wau V	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3850							
Service 25H.....	146	P 30x5	Wau V	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3850							
Star Fleettruck.....	950	P 30x5	Wau V	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3850							
Stewart Buddy.....	985	P 30x5	Wau V	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3850							
United 16.....	120	P 32x4 1/2	Wau X	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3850							
United 16C.....	120	P 32x4 1/2	Wau X	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3850							
U S U.....	180	P 34x5	Wau X	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3850							
Wachsmann S.....	152	P 34x5	Wau X	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3850							
Yellow Cab T-1.....	1450	P 33x5	Wau X	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3850							
Yellow Cab T-1.....	1550	P 33x5	Wau X	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3850							
Yellow Knight T2.....	1065	P 30x5	Wau V	4-3 1/2x4 1/2	25.3	PC	Non	McC	Str	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	B B	1 1/2	5.1	24.48	A	3850							
1 1/4 Ton																														
Aene 24.....	136	P 30x5	Con S4	4-4 1/2x4 1/2	27.3	PC	Non	Per	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3450							
Biederman.....	154	P 34x5	Con S4	4-4 1/2x4 1/2	27.3	PC	Non	Per	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3600							
Clinton 20B.....	153	P 30x5	Wau V	4-4 1/2x4 1/2	28.9	PC	Non	Per	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3750							
Clydesdale 10A.....	154	P 34x5	Con S4	4-4 1/2x4 1/2	28.9	PC	Non	Per	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3750							
Defiance.....	130	P 30x5	Own S	6-3 1/2x4 1/2	23.4	PC	Non	Per	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3100							
Gramm 283 N.....	1485	P 30x5	Own S	6-3 1/2x4 1/2	23.4	PC	Non	Per	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3355							
Gramm-Bernstein 10.....	129	P 30x5	Lye CT	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3020							
Guider B.....	132	P 30x5	Bud WTU	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3250							
Guider B-6.....	132	P 30x5	Con 8R	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3000							
Hahn B2.....	132	P 30x5	Con 8R	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3000							
Int Harvester S-24.....	130	P 32x4 1/2	Her CT	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3025							
Int Harvester S-26.....	130	P 32x4 1/2	Lye 48G	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3090							
Macar 36.....	140	P 30x5	Bud HS	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3700							
Master 11.....	132	P 35x5	Bud HS	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3700							
Noble 124.....	143	P 30x5	Lye CT	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3500							
Republic 75.....	124	P 30x5	Lye CT	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3500							
Ruggles 18.....	134	P 30x5	Lye SG	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3500							
Selden Pacemaker 24.....	144	P 30x5	Con S4	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3580							
Stewart 16X.....	1245	P 30x5	Lye CT	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3580							
Stoughton C.....	1370	P 30x5	Lye CT	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	2880							
United 20C.....	130	P 30x5	Own OX	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	2650							
United 20C.....	130	P 30x5	Own OX	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	2900							
Victor 25.....	1105	P 30x5	Her O	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3000							
Woods 18B.....	129	P 30x5	Bud WTU	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3200							
Woods 18BC.....	116	P 30x5	Bud WTU	4-3 1/2x4 1/2	22.5	PC	Non	G&O	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 54010	S W	1 1/2	5.85	22.4	A	3250							
1 1/2 Ton																														
Aene 36.....	186	P 32x6	Con S4	6-3 1/2x4 1/2	27.3	PC	Non	Per	Zen	A-L	A-L	D. Ful	Ful SU12	D	3	Blo	Cal 5620	S W	1 1/2	6.43	25.7	A	3600							
Armstrong 30.....	2300	P 34x4	Her OX	4-4 1/2x4 1/2	28.9																									

[illegible]

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Trade Name and Model	General			Engine					Electrical System		Clutch	Gearset		Rear Axle		Gear Ratios		Front Axle Make and Model	Springs (Make)	Steering Gear (Make)	Wheels (Make)	Rims (Make)	Chassis Weight (lbs.)		
	Standard Wheelbase (inches)	Tire Size		Make and Model	Bore and Stroke	N.A.C.C. Rated H.P.	Valve Arrangement	Oiling System	Governor (Make)	Radiator (Make)		Carburetor (Make)	Fuel System	Ignition System (Make)	Generator and Starter (Make)	Type and Make	Make and Model							Location	No. of Forward Speeds	Universal (Make)	Type	Total Reduction in High	Total Reduction in Low	Brakes, Location
		Front (inches)	Rear (inches)								High							Low							
1½ Ton—(Cont'd)																									
Boughton J.	140	P 32x6	P 32x6	Ow	4-35x55	21.0	H	FP	Non	Tyr	Zen	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 53000	W	5.87	25.3	A	Col 53000
Traylor B.	140	P 34x6	P 34x6	Her OX	4-35x55	22.5	L	PC	Non	G&O	Zen	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	She W-1501	S	7.80	28.0	A	She W-1501
United 30	148	P 30x5	P 30x5	Her OX	6-35x54½	27.3	L	PC	Non	G&O	Zen	V	A-L	A-L	D. B-L	B-L 31	4	4	Spi	Col 54000	S	5.86	28.08	A	Col 54000
U. S. L.	148	P 30x5	P 30x5	Bud HS	6-35x54½	27.3	L	PC	Non	Ow	Str	V	A-L	A-L	D. B-L	B-L 31	4	4	Spi	Col 54000	S	5.86	28.08	A	Col 54000
U. S. N.	148	P 32x6	P 32x6	Bud HS	6-35x54½	27.3	L	PC	Non	Ow	Str	V	A-L	A-L	D. B-L	B-L 31	4	4	Spi	Col 54000	S	5.86	28.08	A	Col 54000
Victor 40.	1295	S 36x6	S 36x6	Her O	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	7.60	36.5	A	Col 54000
W. Schmitt J.	1295	S 36x6	S 36x6	Her O	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	7.60	36.5	A	Col 54000
White 20.	1295	S 36x6	S 36x6	Her O	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	7.60	36.5	A	Col 54000
Wachusett J.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett K.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett L.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett M.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett N.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett O.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett P.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett Q.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett R.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett S.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett T.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett U.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett V.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett W.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett X.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett Y.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett Z.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AA.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AB.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AC.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AD.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AE.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AF.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AG.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AH.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AI.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AJ.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AK.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AL.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AM.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AN.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AO.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AP.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AQ.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AR.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AS.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AT.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AU.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AV.	144	S 36x4	S 36x4	Con K4	4-35x55	22.5	L	PC	Non	Ow	Str	V	Boe-A	Boe-A	D. B-L	B-L 31	4	4	Spi	Col 54000	S	6.1	24.0	A	Col 54000
Wachusett AW.	144	S 36x4	S 36x4	Con K4	4-35x55	2																			

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Woods 36 W4
2 1/2 Ton

***For export only**

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Trade Name and Model	General		Engine					Electrical System		Clutch	Gearset		Rear Axle		Gear Ratios		Front Axle Make and Model	Springs (Make)	Steering Gear (Make)	Wheels (Make)	Rims (Make)	Chassis Weight (lbs.)						
	Standard Wheelbase (inches)	Tire Size	Rear (Inches)	Make and Model	Number of Cylinders	N.A.C.C. Rated H.P.	Valve Arrangement	Oiling System	Governor (Make)		Radiator (Make)	Fuel System		Ignition System	Generator and Starter	Type and Make							Make and Model	Final Drive	Type	Total Reduction in High	Total Reduction in Low	Brakes, Location
												Carburetor (Make)	Fuel Feed															
3 Ton—Cont'd																												
King Zeller 60	150	S 36x51	S 36x10	Con K4	4-4 1/2x5 1/2	27.2	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
King Zeller 62A	166	S 36x51	S 36x10	Con K4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Kleiber	4100	S 36x51	S 36x10	Con L4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Kleiber Spec.	4350	S 36x51	S 36x10	Con L4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Krebs 64	163	S 36x51	S 36x10	Con L4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Krebs 66	163	S 36x51	S 36x10	Con L4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Lange H	4250	S 36x51	S 36x10	Con K4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Lange E3	3850	S 36x51	S 36x10	Con K4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Larabee XH25	3300	S 36x51	S 36x10	Con K4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Le Moon H-30	Opt	P 31x7	S 36x10	Con K4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Le Moon H-31	Opt	P 31x7	S 36x10	Con K4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Macar 64	177	S 36x51	S 36x10	Con K4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Macar 66	177	S 36x51	S 36x10	Con K4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
National 40	4850	S 36x51	S 36x10	Con K4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
National 41	4600	S 36x51	S 36x10	Con K4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Noble 164	182	P 34x7	S 36x10	Bud EBU	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Noble 166	182	P 34x7	S 36x10	Bud EBU	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Oshkosh H	4175	S 36x51	S 36x10	Her L	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Oshkosh H-30	4275	S 36x51	S 36x10	Her L	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Pierre-Arrol XB	3750	S 36x51	S 36x10	Bud YBU	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Rehberger B.	159	P 32x6	S 36x10	Con K4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Republic 25	165	S 36x51	S 36x10	Con K4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Republic 25W	165	S 36x51	S 36x10	Her FU	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Ruggles 45	148	S 36x51	S 36x10	Her OX	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Sanford S 345	189	S 36x51	S 36x10	Bud DW6	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Sanford S 345	188	S 36x51	S 36x10	Bud DW6	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Schacht L.N.	160	S 36x51	S 36x10	Wia RCU	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Selden Roadmaster	165	P 32x6	S 36x10	Con K4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Selden Unit 53	154	S 36x51	S 36x10	Con L4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Stoughton F.	156	S 36x51	S 36x10	Con L4	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
Tracy 6000	3400	S 36x51	S 36x10	Con SA	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
United 40D	3275	S 36x51	S 36x10	Bud ETU	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
U. S. 30	3375	P 34x7	S 36x10	Her OX	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
U. S. 31	3275	S 36x51	S 36x10	Bud DW	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
U. S. 32	3275	S 36x51	S 36x10	Bud EBU-1	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
U. S. 33	3275	S 36x51	S 36x10	Wau CU	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
U. S. 34	3275	S 36x51	S 36x10	Wau CU	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
U. S. 35	3275	S 36x51	S 36x10	Wau CU	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
U. S. 36	3275	S 36x51	S 36x10	Wau CU	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
U. S. 37	3275	S 36x51	S 36x10	Wau CU	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
U. S. 38	3275	S 36x51	S 36x10	Wau CU	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
U. S. 39	3275	S 36x51	S 36x10	Wau CU	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
U. S. 40	3275	S 36x51	S 36x10	Wau CU	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
U. S. 41	3275	S 36x51	S 36x10	Wau CU	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
U. S. 42	3275	S 36x51	S 36x10	Wau CU	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
U. S. 43	3275	S 36x51	S 36x10	Wau CU	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
U. S. 44	3275	S 36x51	S 36x10	Wau CU	4-4 1/2x5 1/2	33.7	L	FP	Pha	Chi	Str	Boe-A	Boe-A	D-B-L	B-L 51	W	4	9.25	49.5	A	Tim 15302	Tim 15302	6200					
U. S. 45	3275	S 36x51	S 36x10	Wau CU	4-4 1/2x5 1/2</																							

[illegible]

Trade Name and Model	General		Engine				Electrical System		Clutch	Gearset	Rear Axle		Gear Ratios		Front Axle Make and Model	Springs (Make)	Steering Gear (Make)	Wheels (Make)	Rims (Make)	Chassis Weight (lbs.)							
	Standard Wheelbase (Inches)	Tire Size	Bore and Stroke	N.A.C.C. Rated H.P.	Valve Arrangement	Oiling System	Governor (Make)	Radiator (Make)			Carburetor (Make)	Fuel System	Ignition System								Generator and Starter (Make)	Type	Total Reduction in High	Total Reduction in Low	Brakes, Location		
													Make and Model	No. of Forward Speeds												Universal (Make)	Make and Model	Location
5 Ton	180	S 40x14	4-5x6	40-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 104	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 106	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 108	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 110	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 112	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 114	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 116	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 118	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 120	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 122	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 124	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 126	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 128	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 130	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 132	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 134	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 136	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 138	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 140	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 142	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 144	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 146	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 148	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 150	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 152	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 154	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 156	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 158	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 160	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 162	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 164	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 166	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 168	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 170	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 172	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 174	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 176	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 178	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 180	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 182	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 184	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 186	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 188	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 190	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 192	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 194	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 196	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 198	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 200	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 202	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 204	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 206	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 208	180	S 40x14	4-4 1/2x5 1/2	36-0 L	FP	Pie	Per	Zen	V	Boe-A	D, Ful	Ful HOG	A	8	Blo	Tim 67600	W	F	8.8	82.5	A	Tim 17300	Det	Ros	Ros	Sml	8850
Acme 210	180	S 40x14	4-4 1/2x5 1/2	36																							

5½ Ton and Over
Acme 104.....1180

5 1/2 Ton and Over		5 Ton		4 Ton		3 Ton		2 Ton		1 Ton		3/4 Ton		1/2 Ton		3/8 Ton		1/4 Ton		1/8 Ton		1/16 Ton		1/32 Ton		1/64 Ton		1/128 Ton		1/256 Ton		1/512 Ton		1/1024 Ton		1/2048 Ton		1/4096 Ton		1/8192 Ton		1/16384 Ton		1/32768 Ton		1/65536 Ton		1/131072 Ton		1/262144 Ton		1/524288 Ton		1/1048576 Ton		1/2097152 Ton		1/4194304 Ton		1/8388608 Ton		1/16777216 Ton		1/33554432 Ton		1/67108864 Ton		1/134217728 Ton		1/268435456 Ton		1/536870912 Ton		1/1073741824 Ton		1/2147483648 Ton		1/4294967296 Ton		1/8589934592 Ton		1/17179869184 Ton		1/34359738368 Ton		1/68719476736 Ton		1/137438953472 Ton		1/274877906944 Ton		1/549755813888 Ton		1/1099511627776 Ton		1/2199023255552 Ton		1/4398046511104 Ton		1/8796093022208 Ton		1/17592186044416 Ton		1/35184372088832 Ton		1/70368744177664 Ton		1/140737488355328 Ton		1/281474976710656 Ton		1/562949953421312 Ton		1/1125899906842624 Ton		1/2251799813685248 Ton		1/4503599627370496 Ton		1/9007199254740992 Ton		1/18014398509481984 Ton		1/36028797018963968 Ton		1/72057594037927936 Ton		1/144115188075855872 Ton		1/288230376151711744 Ton		1/576460752303423488 Ton		1/1152921504606846976 Ton		1/2305843009213693952 Ton		1/4611686018427387904 Ton		1/9223372036854775808 Ton		1/18446744073709551616 Ton		1/36893488147419103232 Ton		1/73786976294838206464 Ton		1/147573952589676412928 Ton		1/295147905179352825856 Ton		1/590295810358705651712 Ton		1/1180591620717411303424 Ton		1/2361183241434822606848 Ton		1/4722366482869645213696 Ton		1/9444732965739290427392 Ton		1/18889465931478580854784 Ton		1/37778931862957161709568 Ton		1/75557863725914323419136 Ton		1/151115727451828646838272 Ton		1/302231454903657293676544 Ton		1/604462909807314587353088 Ton		1/12089258196146291747066176 Ton		1/24178516392292583494132352 Ton		1/48357032784585166988264704 Ton		1/96714065569170333976529408 Ton		1/193428131138340667953058816 Ton		1/386856262276681335906117632 Ton		1/773712524553362671812235264 Ton		1/1547425049106725343624470528 Ton		1/3094850098213450687248941056 Ton		1/6189700196426901374489882112 Ton		1/12379400392853802748979764224 Ton		1/24758800785707605497959528448 Ton		1/49517601571415210995919056896 Ton		1/99035203142830421991838113792 Ton		1/19807040628566084398367622784 Ton		1/39614081257132168796735245568 Ton		1/79228162514264337593470491136 Ton		1/158456325028528675186940982272 Ton		1/316912650057057350373881964544 Ton		1/633825300114114700747763929088 Ton		1/1267650600228229401495527858176 Ton		1/253530120045645880299105571632 Ton		1/507060240091291760598211143264 Ton		1/1014120480182583521197642286528 Ton		1/2028240960365167042395284573056 Ton		1/4056481920730334084790569146112 Ton		1/8112963841460668169581138292224 Ton		1/16225927682921336338362765584448 Ton		1/3245185536584267267672553116896 Ton		1/6490371073168534535345106233792 Ton		1/12980742146337069070690212467584 Ton		1/25961484292674138141380424935168 Ton		1/51922968585348276282760849870336 Ton		1/103845937170696552565521699740672 Ton		1/207691874341393105131043399481344 Ton		1/415383748682786210262086798962688 Ton		1/830767497365572420424173597925376 Ton		1/16615349947311448408483471958512 Ton		1/332306998946228968169669439170224 Ton		1/664613997892457936339338878340448 Ton		1/132922799578491587267867776668096 Ton		1/265845599156983174535735553336192 Ton		1/531691198313966349071471106672384 Ton		1/10633823966279326981428222133456 Ton		1/21267647932558653962856444266912 Ton		1/42535295865117307925712888533824 Ton		1/85070591730234615851427771067648 Ton		1/170141183460469231702845542135296 Ton		1/3402823	
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Motor Bus Chassis Specifications

For Other Chassis Which Are Recommended and Adaptable for Bus Use, See Models Having Sign (§) in the "COMMERCIAL CAR SPECIFICATIONS"

Key of abbreviations, page 48

[illegible]

MAKE AND MODEL	GENERAL			ENGINE			ELECTRICAL SYSTEM			TRANSMISSION		REAR AXLE		FRONT AXLE		TIRES AND WHEELS		Turning Radius (Ft.)		DIMENSIONS (In.)											
	Seating Capacity	WEIGHT		Make and Model	Number of Cylinders, Bore and Stroke	Radiator Make	Carburetor Make	ELECTRICAL SYSTEM			GEARSET		Clutch	REAR AXLE		Make and Model	Steering Gear	TIRES (In.)		Wheels—Make	Floor Height	Length	Width								
		Chassis Only	Chassis with Body					Recommended Body Allowance	Ignition System	Generator and Starter	Make	Battery		Normal Speed	Type and Make			Make and Model	Final Drive					Brake Location	Make and Model	Front	Rear				
																												Type and Make	Make and Model	Number of Forward Speeds	Universal Make
C.F. 508	30	230	Ha S	6-41x5½	Zen	Del	Del	12-115	...	D, B-L	B-L	4	Spl	Tim	W	E	Tim	P 38x7	DP38x7	Bud	...	...	...					
C.F. 519 (gas. elec.).	23	230	Ha S	6-41x5½	Zen	Del	Del	12-115	...	D, B-L	B-L	4	Spl	Tim	W	E	Tim	P 36x8	DP36x8	Bud	...	...	...					
C.F. 601	23	198	Con 6B	6-32x5	Zen	Del	Del	12-115	...	D, B-L	B-L	4	Spl	Tim	W	E	Tim	P 34x7½	DP34x7½	Bud	...	...	...					
...me 116...	18	8460	Con 7T	6-32x5	Per	Del	Del	12-115	...	D, B-L	B-L	4	Spl	Tim	W	E	Tim	P 32x6	DP32x6	Mot	...	...	...					
...me 121...	18	4910	Con 7T	6-32x5	Sir	Del	Del	12-115	...	D, B-L	B-L	4	Spl	Tim	W	E	Tim	P 32x6	DP32x6	Mot	...	...	...					
...ideport HB	24	6500	Bud BUS	6-43x5½	Zen	Del	Del	12-115	...	D, B-L	B-L	4	Spl	Tim	W	E	Tim	P 34x7	DP34x7	Bud	...	...	...					
...ckway EB	18	3975	Wls SU	6-43x5	Zen	Del	Del	12-220	42	7	D, B-L	B-L	3	Spl	Col 54003	Col 5227	Ros	P 32x6	DP32x6	Van	...	...	...					
...ckway EB4	18	4150	Wls Y	6-33x5	Zen	Del	Del	12-220	45	8	D, B-L	B-L	3	Spl	Col 54003	Col 5227	Ros	P 32x6	DP32x6	Van	...	...	...					
...ckway H	22	6450	Wls Y	6-33x5	Zen	Del	Del	12-220	45	8	D, B-L	B-L	3	Spl	Col 54003	Col 5227	Ros	P 32x6	DP32x6	Van	...	...	...					
...ckway H	22	6450	Wls Y	6-33x5	Zen	Del	Del	12-220	45	8	D, B-L	B-L	3	Spl	Col 54003	Col 5227	Ros	P 32x6	DP32x6	Van	...	...	...					
...ckway SW	18	4200	Wls Y	6-43x5	Zen	Del	Del	12-220	45	8	D, B-L	B-L	3	Spl	Col 54003	Col 5227	Ros	P 32x6	DP32x6	Van	...	...	...					
...ckway J1	24	7680	Wls Y	6-43x5	Zen	Del	Del	12-220	45	8	D, B-L	B-L	3	Spl	Col 54003	Col 5227	Ros	P 32x6	DP32x6	Van	...	...	...					
...ckway J1	30	8923	Wls Y	6-43x5	Zen	Del	Del	12-220	45	8	D, B-L	B-L	3	Spl	Col 54003	Col 5227	Ros	P 32x6	DP32x6	Van	...	...	...					
...ckway J1	30	8923	Wls Y	6-43x5	Zen	Del	Del	12-220	45	8	D, B-L	B-L	3	Spl	Col 54003	Col 5227	Ros	P 32x6	DP32x6	Van	...	...	...					
...ckway J1	24	6000	Bud BUS	6-43x5	Zen	Del	Del	12-220	45	8	D, B-L	B-L	3	Spl	Col 54003	Col 5227	Ros	P 32x6	DP32x6	Van	...	...	...					
...ckway J1	24	6000	Bud BUS	6-43x5	Zen	Del	Del	12-220	45	8	D, B-L	B-L	3	Spl	Col 54003	Col 5227	Ros	P 32x6	DP32x6	Van	...	...	...					

†-Two.

Electric Commercial Cars

Name and Model Number	Total Weight Rating on Four Tires	Chassis Weight—Exclusive of Battery	Minimum Load Capacity	Maximum Load Capacity	Chassis Price	Maximum Speed	Location of Battery	Mileage Per Charge	Motor	Controller	Speeds Forward	Drive	Rear Axle	Spring	Front Tires	Rear Tires	Steering Gear	Wheelbase	Per Cent of Weight on Rear Wheels
C.T.H-1	5600	2400			1850	14	A	55	G-E	Own	4	Own	F	She	S 36x3	S 36x4	W	108	67
C.T.F-1.5	6600	2800			2475	14	A	60	G-E	Own	4	Own	F	She	S 36x3½	S 36x4	W	94	67
C.T.H-1.5	6600	2800			2475	14	A	60	G-E	Own	4	Own	F	She	S 36x3	S 36x4	W	110	67
C.T.F-2	8000	3100			2675	14	A	50	G-E	Own	4	Own	F	She	S 36x3½	S 36x5	W	96	67
C.T.H-2	8000	3100			2675	14	A	50	G-E	Own	4	Own	F	She	S 36x3½	S 36x5	W	124	67
C.T.F-4	11850	4200			3250	12	A	50	G-E	Own	4	Own	F	She	S 36x4	S 36x7	W	116	67
C.T.F-7	17700	5800			5150	11	A	45	G-E	Own	4	I	D	She	S 36x6	S 36x7	W	122	58
C.T.A-10	22250	6500			4300	11	A	45	G-E	Own	4	Own	F	She	S 36x5	DS36x6	W	136	67
C.T.F-10	22750	7000			4500	10	A	45	G-E	Own	4	I	D	She	S 36x7	S 36x8	W	132	58
C.T.F-14	28850	8000			5000	8	A	45	G-E	Own	4	Own	F	She	S 36x6	DS36x6	W	152	67
Electruck 48	8700	3600				15	A	50	G-E	G-E	4	C	Own	Eat	S 34x4	S 34x5	Ros	112	60
Electruck 39	10400	4200				15	A	50	G-E	G-E	4	C	Own	Eat	S 34x4	S 34x6	Gem	135	60
Electruck 27	32000	12200				12	A	50	G-E	Own	5	C	Own	Eat	S 36x7	S 40x14	Cem	168	70
O.B.-B						13			G-E	Own		C	D		S 36x4	DS36x3½	Own	167	
O.B.-C						11			G-E	Own		C	D		S 36x5	DS36x4	Own	135	
O.B.-D						10			G-E	Own		C	D		S 36x6	DS36x5	Own	143	
Walker 10	2400					15	H&S	60	G-E	Own	4	S	Cl	Mat	S 32x3½	S 32x4½	Ros	108°	66
Walker 20	3000					14	A	50	Wes	Own	5	Own	Own	Mat	S 34x3½	S 36x4	Ros	94°	66
Walker 25	3400					14	A	50	Wes	Own	5	Own	Own	Mat	S 34x4	S 36x5	Ros	101°	66
Walker 45	4200					13	A	50	Wes	Own	5	Own	Own	Mat	S 36x4	S 36x6	Ros	114°	66
Walker 50	4800					13	A	50	Wes	Own	5	Own	Own	Mat	S 36x5	S 36x8	Ros	126°	66
Walker 65	6500					11	A	50	G-E	Own	5	Own	Own	Mat	S 36x5	DS40x6	Ros	131°	66
Walker 75	7200					10	A	50	G-E	Own	5	Own	Own	Mat	S 36x6	DS40x6	Ros	141°	66
Ward A211	4850	1800	600	1150		15	S	75	G-E	Own	4	W	She	She	S 32x3	S 32x3½	Own	88	56
Ward B-222	4900	2300	1020	1700		14	S	84	G-E	Own	4	W	She	She	S 32x3½	S 32x4	Own	91	62
Ward C-211	8000	2670	2170	2880		13	S	65	G-E	Own	4	W	She	She	S 32x3½	S 34x5	Own	96	64
Ward E-211	12000	3570	4290	5430		12½	S	56½	G-E	Own	4	W	She	She	S 34x4	S 36x6	Own	108	65
Ward G-211	16000	4500	6180	7760		11	S	44	G-E	Own	5	W	She	She	S 36x5	S 36x8	Own	120	68
Ward J-211	22500	6630	9500	11200		10	S	39½	G-E	Own	5	W	She	She	S 36x6	S 36x10	Own	134	70
Ward M-211	30000	8430	13780	15920		9	S	36	G-E	Own	5	W	She	She	S 36x7	DS36x7	Own	152	71

NOTE: Battery Equipment on all above makes is at the option of the purchaser. Battery Location Abbreviations: A-amidships; H-under hood; and S-under seat

KEY OF ABBREVIATIONS

For addresses of manufacturers listed below see Chilton Catalog and Directory

Wheelbase *More than one wheelbase furnished. Tires B—Balloons. P—Pneumatics standard equip. DP—Dual pneumatics standard equipment. S—Solids. DS—Dual solids. †—Pneumatics can be furnished at extra cost. Engine Bud—Buda Co. Con—Continental M. Corp. D—Head and Side. FP—Full Pressure to all bearings including wrist pins. H—Overhead. Has—American Car & Foundry Co. Her—Hercules Motor Corp. I—In Head. Jackson—Master M. T. Mfg. Co. Kni—Yellow Sleeve V. E. Wks. L—L-Head. Lye—Lycoming M. Corp. PC—Pressure to all crankshaft and connecting-rod bearings. PS—Pressure with splash. SP—Circulating splash. T—T-Head. Wau—Waukesha M. Co. Wis—Wisconsin M. Mfg. Co. Yell—Yellow Sleeve V. E. Wks. X—Sleeve. Governor Dup—Eisemann Magneto Corp. Han—Handy Gov. Co. K. P.—K. P. Products Co. McC—E. R. Klemm. Mon—Monarch Gov. Co. Non—Not Supplied. Pha—Pharo Mfg. Co. Pie—Pierce Governor Co. Sim—Eisemann Magneto Corp. Wau—Waukesha M. Co. Radiator Bow—Bowerbank, E. R. Co. Bus—Bush Mfg. Co. Chi—Chicago Mfg. Co. Fed—Feddars Mfg. Co. G&O—G. & O. Mfg. Co. Har—Harrison Rad. Corp. Lon—Long Mfg. Co. McC—McCord Rad. & Mfg. Co. McK—McKinnon Dash Co. Mod—Modine Mfg. Co. Per—Racine Radiator Co. R-T—Rome-Turney Rad. Co. Tyr—Tyree Auto Rad. Mfg. Co. U. S.—U. S. Cartridge Co.	Fuel System B.B.—Penberthy Injector Co. Car—Carter Carburetor Co. G—Gravity. Hol—Holley Car. Co. Joh—Johnson Co. Mar—Marvel Carburetor Co. P—Pressure. Sch—Wheeler Schebler Car. Co. Ste—Detroit Lubricator Co. Str—Stromberg Motor Devices Co. Til—Tillotson Mfg. Co. V—Vacuum. Zen—Zenith-Detroit Corp. Electrical Systems †—Generator & Starter at Extra Cost. †—Starter not supplied, Generator at Extra Cost. †—Starter at Extra Cost. A-L—Electric Auto-Lite Corp. Apo—Apollo Magneto Corp. Bos-A—Am. Bosch Magneto Co. Bos-R—Rob. Bosch Magneto Co. Con—Connecticut Telephone & Electric Co. Del—Dayton Eng. Lab. Co. DJ—DeJon Elec. Corp. Dyn—Owen Dyneto Corp. Els—Eisemann Magneto Corp. Exi—Electric S. B. Co. G&D—Gray & Davis. Gou—Gould S. B. Co. L-N—Leece-Neville Co. N-E—North East Elect. Co. Non—Not Supplied. Pol—Prest-O-Lite Co. Rem—Delco-Remy Co. Sci—Scintilla Magneto Co. Spl—Splitdorf Electrical Co. USL—U. S. Light & Heat Corp. Ves—Vesta Battery Corp. Wes—Westinghouse E. & M. Co. Wil—Willard S. B. Co.	M-E—Merchant & Evans Co. M. M.—Mechanics Mach. Co. Mun—Muncie Gear Works. O—Disk in Oil. P—Plate. Roc—Rockford Drill. Mach. Co. U—Unit with Engine. W-G—Warner Gear Co. Yell—Yellow Sleeve V. E. Wks. Universal B.G.—Universal Machine Co. Blo—Blood Bros. Mach. Co. Har—Spicer Mfg. Co. M-E—Merchant & Evans Co. M. M.—Mechanics Machine Co. Pet—Cleveland Univ. Parts Co. Pic—Pick Mfg. Co. Spi—Spicer Mfg. Co. The—Thermoid Rubber Co. Thel—Almetal Univ. Joint Co. U-M—Universal Machine Co. U-P—Universal Products Co.	I. C.—Iron City Sp. Co. Mar—Maremont Mfg. Co. Mat—Mather Spring Co. Mer—E. R. Merrill Spring Co. Pen—Penn Sp. Works. Per—Eaton Bum. & Sp. Co. Row—Wm. & Harvey Rowland. Sav—New Era Sp. & Spec. Co. She—Sheldon Axle & Sp. Co. S. P.—Spring Perch Co. S. S.—Standard Steel Sp. Co. Tem—Temme Spring Corp. Tut—Tuthill Sp. Co. U. S.—United States Sp. Co. Steering Gear CAS—Columbus G. & P. Co. D-G—Detroit Gear & Mach. Co. Dod—Dodge Bros. Co. Gem—Gemmer Mfg. Co. Han—Hannum Mfg. Co. Jac—Saginaw Products Co. Lav—Hannum Mfg. Co. Ros—Ross Gear & Tool Co. Woh—Wohlrad Gear Co.	Wheels Arc—Archibald Wheel Co. Bet—Bethlehem Steel Co. Bim—Bimel S. & A. Wheel Co. Bud—Budd Wheel Co. Cal—California Steel Wheel Corp. Cla—Clark Equip. Co. Day—Dayton Steel Found. Co. Dis—Motor Wheel Corp. Hay—Kelsey-Hayes Wheel Co. Hoo—Hoopes, Bro. & Darling-ton. Ind—Indestructible Wheel Co. Int—Mathews Steel Foundry Co. Jon—Phineas, Jones & Co. K-B—Kay Brunner Steel Co. Kel—Kelsey-Hayes Wheel Co. Mot—Motor Wheel Corp. M.M.—Mich. Malleable Iron Co. Pru—Prudden Wheel Co. Sch.—St. Marys W. & S. Co. Sml—Smith Wheel, Inc. StM—St. Marys Wheel Co. Std—Standard Wheel Co. Van—Van Wheel Corp. Van Metal Wheel Div., Erie Malleable Iron Co.
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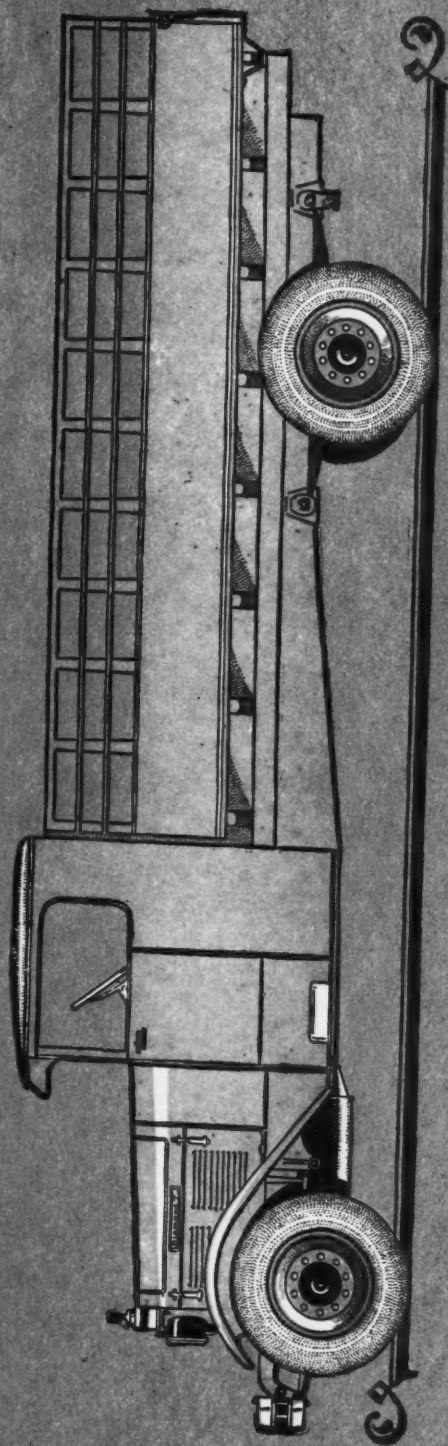
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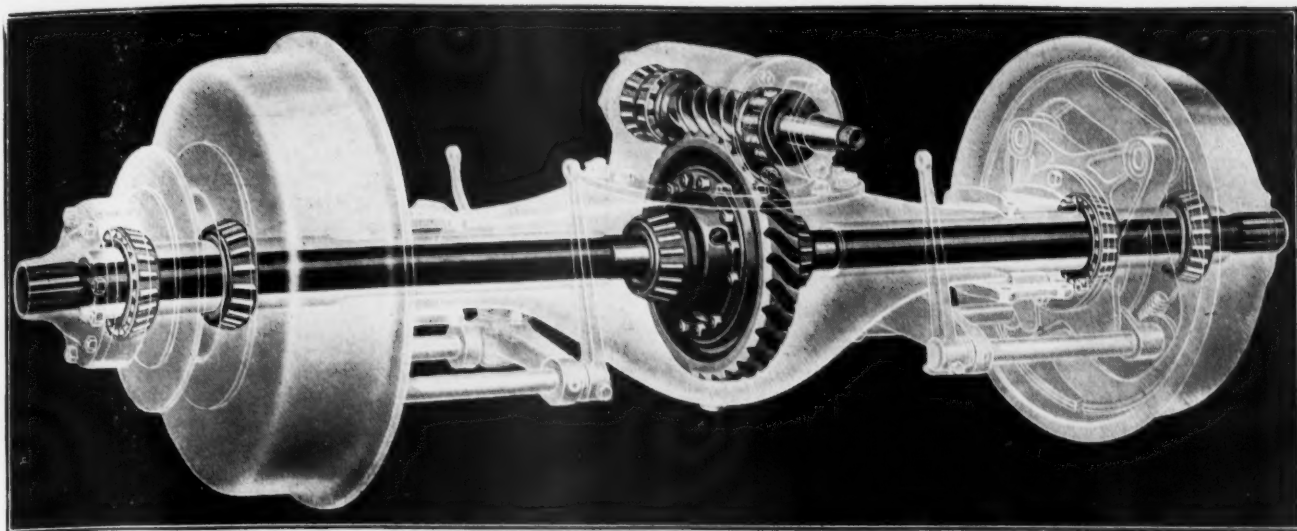
a truck easy to pay for—easy
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THE satisfaction so general among Timken worm-drive users is due to those inherent advantages of the worm—strength, simplicity, accessibility, long life, low upkeep, dead silence.

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We “know how”... been at it since 1904.



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Motor V

Spoksteel

MAKE a note—Space 492—see the furthest progress in bus wheels, sponsored by the world's largest wheel manufacturers.

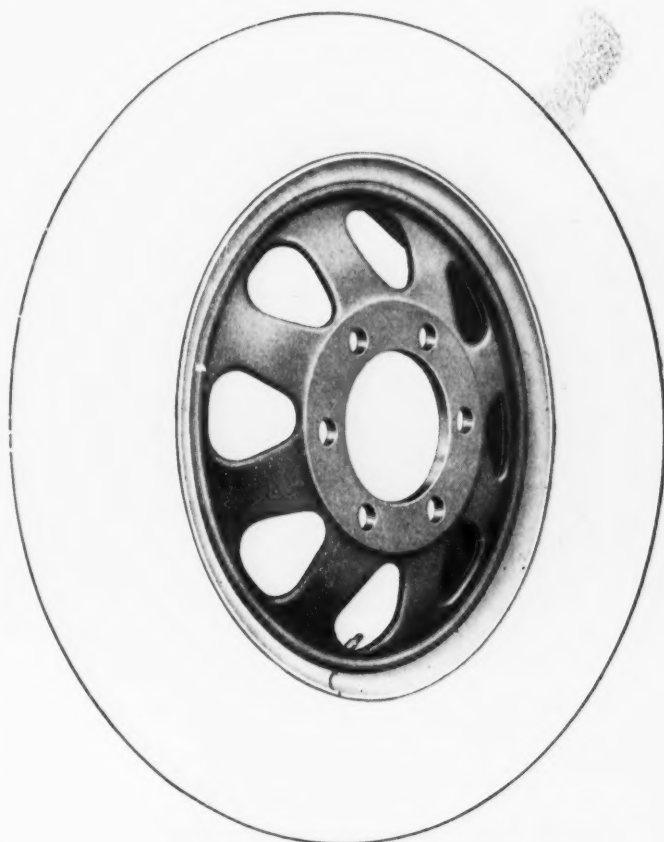
The Spoksteel combination of high-carbon forged steel and spoke-type design adds strength, saves weight, improves cooling, cuts maintenance and makes for silence.

In dual and single operation, the Spoksteel wheel and its mounting assure by far the finest service and the lowest wheel and tire costs ever known to the industry.

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*Interchangeable on Hubs
for Dual Steel Wheels*

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If you use pneumatic tires



GOOD

Type K Truck

es you want this rim

A BASIC advance in rim design, a new epoch in tire usage for truck and bus transportation—that's the meaning of this Goodyear Type K Rim Equipment.

To truck manufacturers: Exhaustive tests in actual use point to this rim as eventual factory equipment for pneumatic-tired trucks. We offer you co-operation in any kind of test.

To truck owners and operators: If your operating conditions call for a change-over from solid to pneumatic tires—single or dual rears—this equipment will do the job in the most efficient, economical and practical way.

To truck dealers and tire dealers: Every distributor and dealer owes it to himself to learn the advantages offered by this equipment. Rim distributors co-operate in adapting wheels.

Outstanding advantages of the Goodyear Type K Rim:

1. Simplicity and ease of operation in tire changing.
2. Adaptability to all types of wheels—single or dual.
3. Lightness with strength.
4. Economy of replacement.
5. Reduction of brake-drum heat through use of ventilated wheels. Saving of tires.

Consists of but two parts—one endless section and one split section. Makes all pneumatic tires quickly detachable as well as *demountable at the rim*. Offers a complete range of sizes.

Developed by Goodyear engineers, made exclusively in the Goodyear shops, widely accessible through rim distributors. Your permanent satisfaction pledged by The Greatest Name in Rubber. Illustrated booklet gladly sent upon request. Write Goodyear, Akron, Ohio, or Los Angeles, California.



GOODYEAR

Copyright 1927, by The Goodyear Tire & Rubber Co., Inc.

& Bus Rim Equipment



Part of a fleet of RELAY trucks operated by Dominion Dump Truck Co. Ltd., sold and serviced by Jones Motors, Ltd., RELAY Distributors at Toronto, Ontario.

TRUCK OFFERS GREATER

A FURTHER step in a program to provide truck buyers with a higher degree of truck operating economy, is marked by the recent merging of Garford Truck Company with Relay Motors Corporation, which had previously acquired Commerce Motor Truck Company and Service Motors, Inc.

Added production facilities, increased engineering and designing skill, enlarged and well-established distribution, gained by combining the Commerce, Garford and Service companies, form the foundations on which the Relay Motors Corporation will build its business.

Part of a SERVICE fleet operated by E. T. Slider Company, sold and serviced by Jacob Weber & Son, SERVICE Distributors at Louisville, Ky.



RELAY MOTORS *Manufacturers of* LIMA,



GARFORD

MERGER OPPORTUNITIES

We feel keenly the responsibility assumed through this merger—a responsibility to serve well those who have purchased and those who are selling Commerce, Garford, Service and Relay trucks.

But our plans are even broader. We will gradually incorporate the unique Relay Axle into an increasing part of our production in order to meet the growing demand for this new principle of truck drive.

Our interest lies in rendering even greater service to truck owners and in offering even greater opportunities to truck dealers.

CORPORATION *Trucks and Buses* OHIO

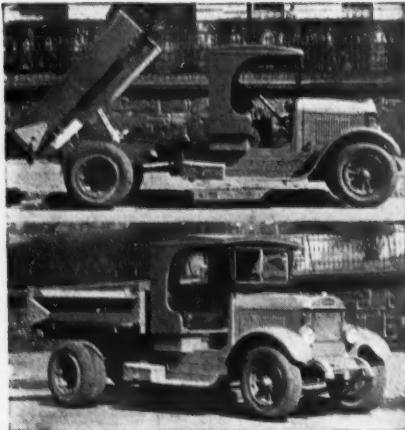
Part of a fleet of GARFORD trucks operated by Coca-Cola Bottling Works, sold and serviced by Mueller Bros., Garford Distributors at Pittsburgh, Pennsylvania.

Part of a fleet of COMMERCE Trucks operated by H. E. Gorsuch Company, sold and serviced by Mar-Del Mobile Company, COMMERCE Distributors at Baltimore, Maryland.

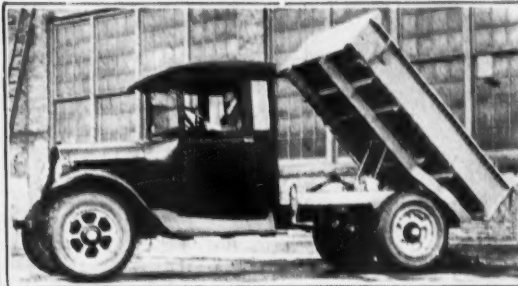


COMMERCE

LIGHT DUTY HEIL DUMP UNITS



Autocar Model A mounted with Heil Hydro Hoist No. 3-26 and Body Model L-10.



Graham Model OC-505, 2 ton truck mounted with Heil Hydro Hoist No. 3N-26, and Body Model L-10.



GMC T20, 1 ton truck, mounted with Heil Hand Hoist and Body Model 92.

SPEED FALL CONTRACTS

Highway Departments, Road Builders, General Contractors and Construction Companies facing the problem of finishing their contracts on time are finding the light duty dump units made by Heil just the equipment to speed up their fall work.

Any make or model of light duty speed truck may be equipped with Heil Units. In the one-ton capacities the Hand Hoist and Body Models 90, 91 and 92, meet a large demand at a minimum cost. A Heil

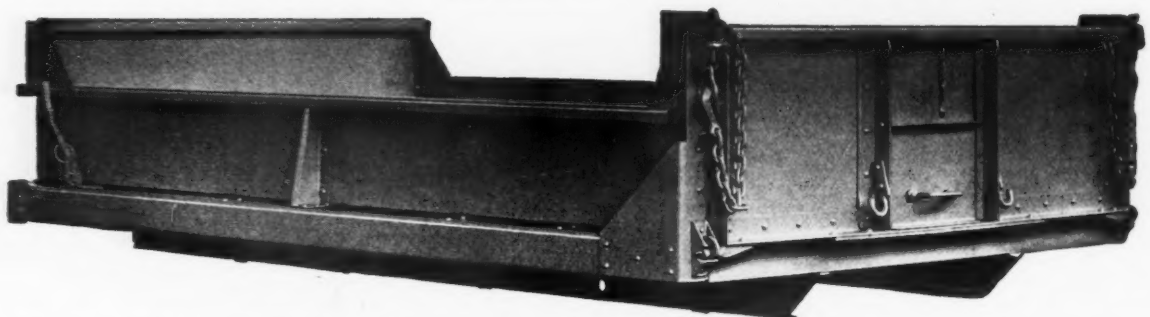
Hydro Hoist No. 3 for 1½ and 2-ton speed trucks keeps pace by dumping full loads in less than one-quarter of a minute, and is guaranteed for two years. Other models of hoists and bodies are made for heavy duty trucks.

Light, sturdy, powerful, compact, dependable, and embodying advanced construction principles and features, Heil dump units are economical because of their speed and low cost operation. Stocks are carried at all branches, insuring prompt delivery. Write for literature.

1143-1150 MONTANA AVENUE **THE HEIL CO.** MILWAUKEE, WISCONSIN

Manufacturers of steel dump bodies, hydraulic hoists, mechanical hoists, hand hoists and compartment truck tanks for all makes and models of trucks.

Factory Branches: New York, Philadelphia, Boston, Detroit, Cleveland, Chicago. Distributors Everywhere.



The "L" (light construction) series of bodies for mounting with No. 3 Hydro Hoists on 1½ and 2 ton trucks of all makes are built in the same shape, but from 300 to 500 pounds lighter than standard construction. The L-11 Body above has full length mudguards, double acting tailgate, with manual control rods protected, sliding door, and provision for chain spreader and extra sides.

TWIN COACH CHOOSES ROBERT BOSCH IGNITION



See it at Space 483, AERA Convention

THE designers of the new Twin Coach have chosen Robert Bosch Ignition for this distinctive new bus, because of its superior performance and dependability.

At space 483 at the AERA Convention in Cleveland you are invited to see not only this equipment but the complete line of Original-Bosch products. These include the new Original-Bosch Super-Energy Magneto, the Original-Bosch Voltage Regulated Bus Generator Spark Plug, Horn, Windshield Wiper, etc.

The Original
Bosch

ROBERT BOSCH MAGNETO CO., Inc.
3603F Queens Blvd., Long Island City, N. Y.

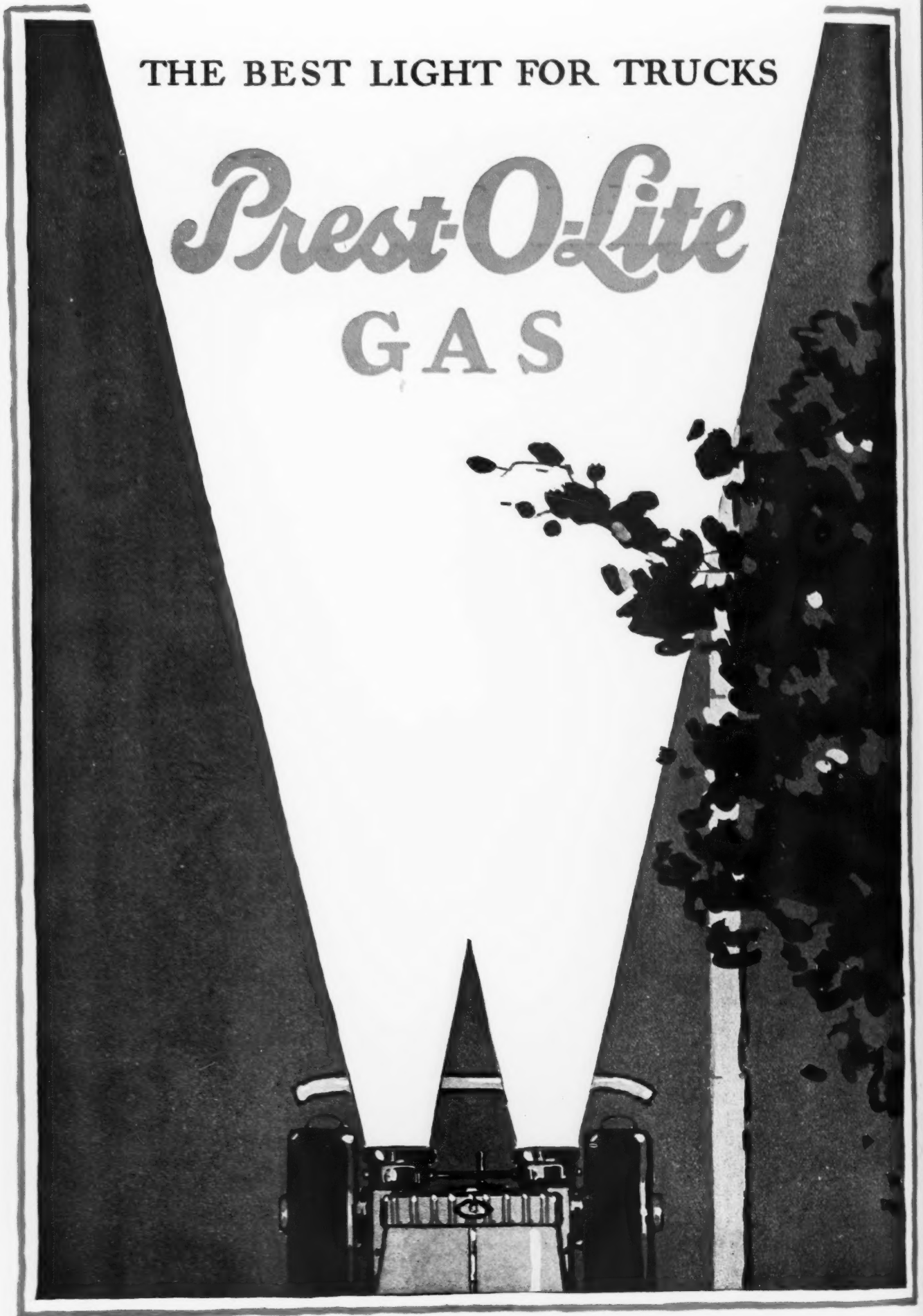


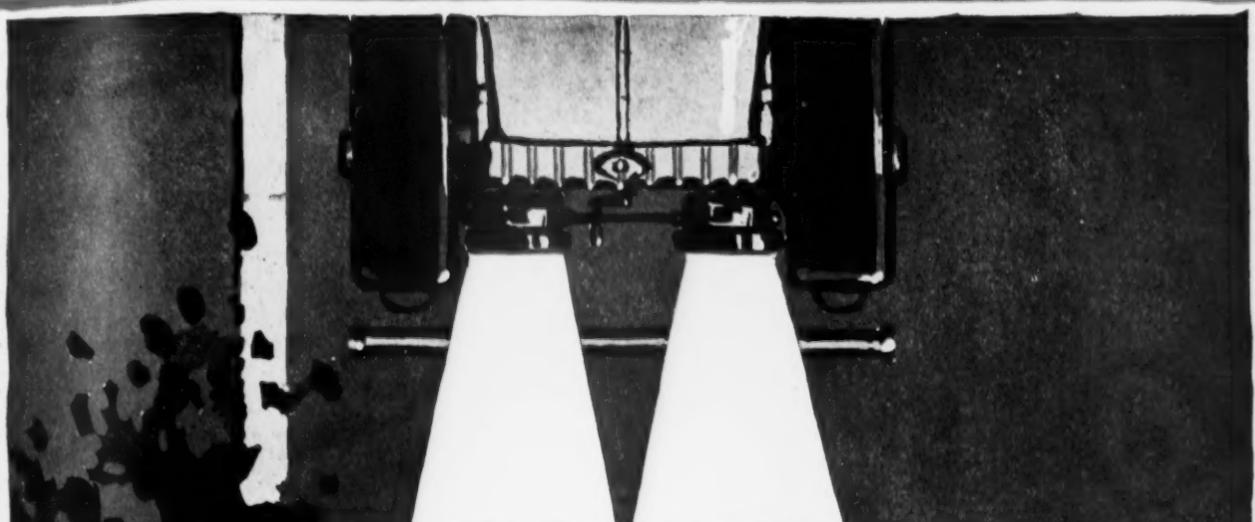
Robert
Bosch,
A.G.

The full name Robert Bosch and the trademark shown at the left appear on all Original-Bosch products—your guaranty of Original-Bosch quality as known the world over since 1887. No connection with any other company or firm bearing the name "Bosch".

THE BEST LIGHT FOR TRUCKS

Prest-O-Lite
GAS





IT'S EASY TO EQUIP
YOUR PRESENT TRUCKS

with

Prest-O-Lite Gas

YOU can have the full advantage of Prest-O-Lite Gas illumination on your present trucks without having to change standard lamp brackets.

The installation is extremely simple and decidedly economical. In addition, it costs less to OPERATE Prest-O-Lite gas lights because:

1. Repairs and replacements are seldom necessary and are never costly.
 2. You pay only for the gas you actually use.
 3. There is no expense when the lights are off.
- Prest-O-Lite service has no superior.

Our thirty-six charging plants supply more than 15,000 Prest-O-Lite Gas Exchange Stations throughout the country. Only a moment is required to exchange an empty tank for a full one. You pay only for the gas.

THE PREST-O-LITE COMPANY, Inc.

New York INDIANAPOLIS San Francisco

In Canada, Prest-O-Lite Company of Canada, Ltd., Toronto, Ont.

Unit of Union Carbide and Carbon Corporation



IMPROVED

Fisher

6-CYLINDER ONE

ALWAYS A GOOD SALES PROPOSITION
WITH THE NEW IMPROVEMENTS IT BECOMES A SUPER



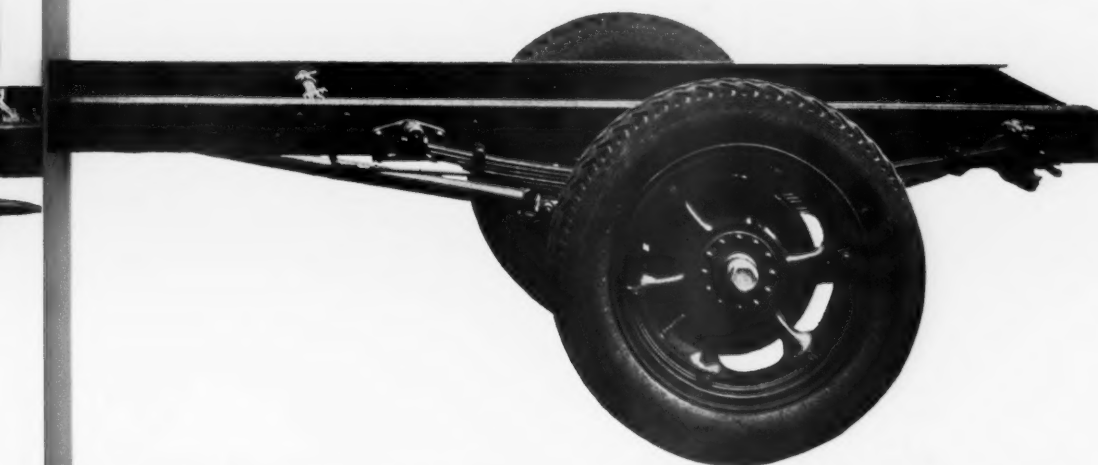
This specially designed chassis with 80-hp. engine, complete seat, complete starter and blow-off lists at the extreme

Junior Express

ONE-TON TRUCK

THE MOTOR TRUCK AND PASSENGER CAR MERCHANT—
SUPREME ALL THE YEAR ROUND PROPOSITION

Larger Motor, Improved Radiator, Head
Lamps, Fenders, Gasoline Tank, Metal
Spoke Type Wheels, Gasoline Filter, Etc.



signed 6-cylinder, one-ton
feet of frame back of driver's
equipped with electric lights,
speedometer and spare rim,
low price

\$999⁰⁰
F.O.B.
DETROIT

STANDARD MOTOR TRUCK CO.

ALBERT FISHER, President

DETROIT, MICH., U. S. A.



FISK TIRES

A Field Worth Cultivating

Commercial Cars and Trucks operate daily, week-in and week-out. Regardless of weather, their mileage is continuous.

Sell the Fisk Transportation Cord

The market is ready made—this heavy duty tire brings repeat business. Its multi-cable bead, its "Fillerless" Cord Construction (a Fisk patented process) and its heat resisting tread provide unusual sales features and produce big mileage and uninterrupted service on the road.

THE FISK TIRE COMPANY, Inc.
Chicopee Falls, Mass.



**THE
WORLD'S
RECOGNIZED STANDARD
WOOD
HYDRAULIC**

**HOISTS AND STEEL BODIES
FOR
EVERY MAKE, MODEL AND
CAPACITY OF MOTOR TRUCK**

The background of the advertisement is a dense collage of numerous vintage motor trucks and dump trucks. Many of these vehicles are equipped with hydraulic hoists, which are shown in various positions, some raised and some lowered. The trucks vary in size and design, representing a wide range of commercial vehicles from the early 20th century. Some of the trucks have visible text on their sides, such as "COAL", "M. SA BADAS", and "WOOD". The central circular text overlay is the focal point, with the word "WOOD" in a large, bold, serif font, and "HYDRAULIC" in a smaller, sans-serif font within a horizontal bar. The overall composition emphasizes the versatility and standardization of the Wood hydraulic hoist system across different truck models and capacities.

High compression cars are here at last!

THE ADVENT of Ethyl Gasoline has in the last year brought a new standard of automobile performance to hundreds of thousands of car owners. As an Ethyl user, you have had the benefits of greatly increased speed, more power on hills and heavy roads, quicker acceleration, and complete elimination of "knock."

But the real high compression automobile is here at last!

Ethyl Gasoline has made it possible!

Ride with Ethyl in a high compression motor and get the thrill of a lifetime. Ethyl Gasoline is available throughout the United States and Canada at pumps which display the "ETHYL" trademark.

ETHYL GASOLINE CORPORATION • 25 Broadway, New York City

ETHYL GASOLINE



IAL
1927

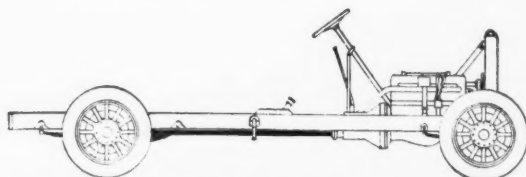


More Efficient - More Rugged
Quieter Running - Longer Lived

EATON

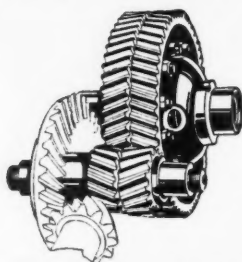
HERRINGBONE DOUBLE REDUCTION **AXLES**

The Eaton Double-Reduction Axle excels in these vital features



Ground and Body Clearance

The type of design embodied in this Eaton axle allows low chassis construction without interfering with road freedom.



Strength and Efficiency

No side-thrust on differential bearings. Coarse toothed, wide-faced gears. Integral Herringbone pinion and shaft. Large diameter shafts with minimum of deflection. Driving strains of both bevel and Herringbone gears taken through serrations instead of bolts or rivets. Forged differential cases protected from side gears by hardened and ground thrust-washers—from spider pinions by forged bronze washers.



NOTE HOW
HERRINGBONE
TEETH CARRY
LUBRICANT UP

Positive Lubrication

The Herringbone Gear is a more effective lubricant conveyor. The gear teeth form "buckets" which carry the oil from the reservoir in the bottom of the axle and keep the entire gear assembly generously lubricated at all times.

Eaton engineers will be pleased to consult with you on your axle problems

THE EATON AXLE & SPRING COMPANY *Cleveland, Ohio*

MADE BY THE MAKERS OF EATON SPRINGS AND EATON BUMPERS

EATON

HERRINGBONE DOUBLE REDUCTION AXLES

Type SK-8510 STEL-KOTE Panel Body

Patents Pending

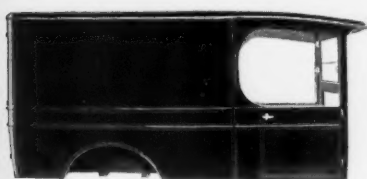


*Make the Body~
Help Sell your Chassis~*

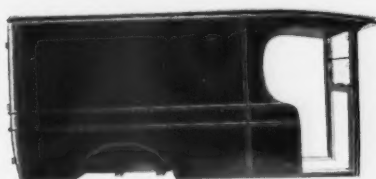
Here is a body that is built to help the chassis dealer increase his yearly turnover. From every angle: design, construction, quality, delivery, flexibility and price, it meets the acid test.

Not only does the STEL-KOTE, UNI-BILT Body incorporate a design that is entirely new, but it also offers a flexibility that is actually phenomenal.

Eighty per cent of the vocational body field, which heretofore meant a special body, is met by this new Hoover line.



Type 8510-714

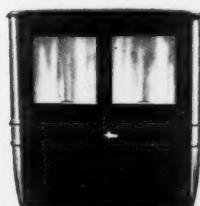


Type 8510-814

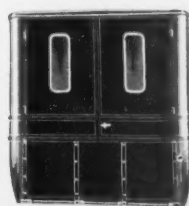


Type 8510-1014

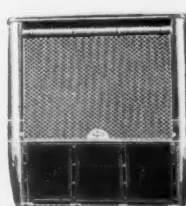
Type SK 8510 Body is built in various lengths to fit practically any 1-1/2-ton straight framed chassis. A variety of front side and rear sections are offered to choose from. Get in touch with your nearest distributor, or write direct for complete information.



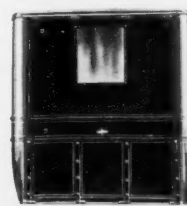
Drop Gate With Curtain



Double Doors Above Drop Gate



Screen Above Drop Gate



Drop Gate With Raise Gate

Send for Information on the Complete STEL-KOTE, UNI-BILT Line of Bodies

HOOVER BODY COMPANY, YORK, PA.

—Authorized Distributors—

H. McFarlane & Company, Chicago
Mayer Body Corporation, Pittsburgh

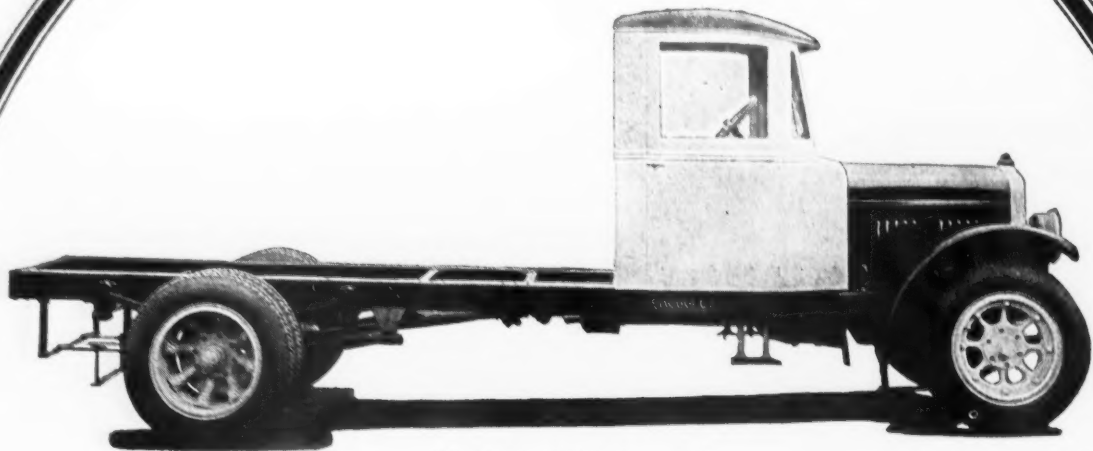
Maryland Truck Equipment Corp.,
Washington, Baltimore

Finnesey, Halladay and Barry, Philadelphia
Hoover Body Company, Long Island City

RUGGLES

RUGGLES

RUGGLES

*Model 30 — With Coupe Cab*

Whether in deep clinging clay or on rock-hard asphalt, terrific strains are imposed upon the heavily loaded motor truck. The RUGGLES Truck has the stamina to haul capacity loads through every working hour continuously and economically.

RUGGLES MOTOR TRUCK COMPANY

SAGINAW, MICHIGAN, U. S. A.

*Member Motor Truck Industries, Inc.*TRUCKS
BUSES
RUGGLES
 IT'S A GOOD JOB
FOURS
SIXES



Quick Seating
is a factor
in the Quality of
QUALITY BRAND
Piston Rings

The Piston
RING COMPANY

Muskegon, Michigan

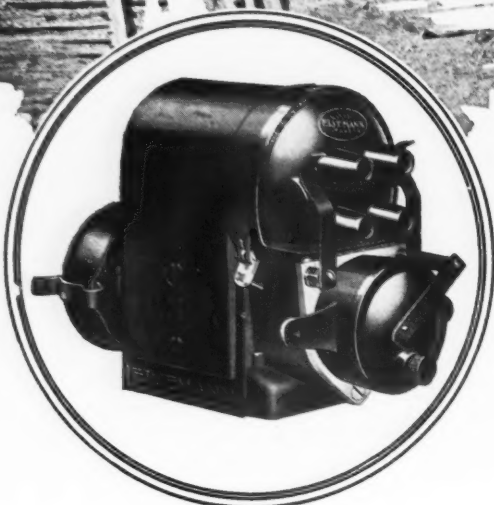
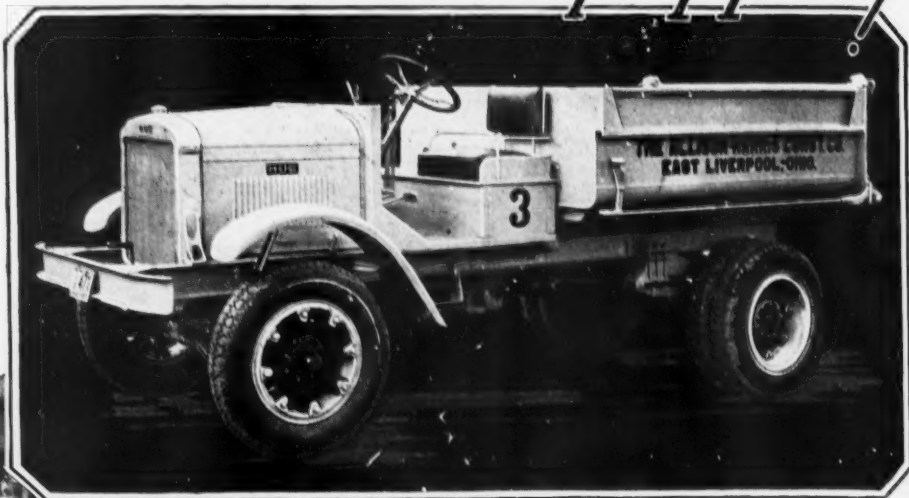
QUALITY

NO-LEAK-O

DRAIN-OIL

HUG MOTOR TRUCKS

are Eisemann Equipped



THE very nature of the service HUG Trucks are designed to perform calls for a sturdy, shock-proof magneto.

Today, hauling sand and stone over bumpy roads . . . tomorrow, down into a deep excavation, up to the hubs in mud . . . such are the conditions under which these Dump Trucks operate - with never a let-up for inspection and care-taking. An out-of-the-ordinary ignition system is required, to withstand such abuse.

And the-out-of-the-ordinary ignition system to be found under the hood of a HUG Truck is an Eisemann High Tension Magneto.

EISEMANN MAGNETO CORPORATION

165 Broadway, New York

DETROIT

SAN FRANCISCO

CHICAGO

EISEMANN

ELECTRICAL EQUIPMENT

A New Hug Feature— The Hug Ready Mix Concrete Rear Bottom Dump Body



ONE OF THE FLEET of 20 Model "88" Hug Road-builders equipped with bottom dump ready mix body recently delivered to the Cleveland Trinidad Paving Co. of Cleveland, Ohio.

THE NEW HUG Bottom Dump Ready Mix Body solves the problem of transporting wet concrete.

The entire mixture is discharged at the rear of the truck with a re-mixing action, as it leaves the body through the bottom dump.

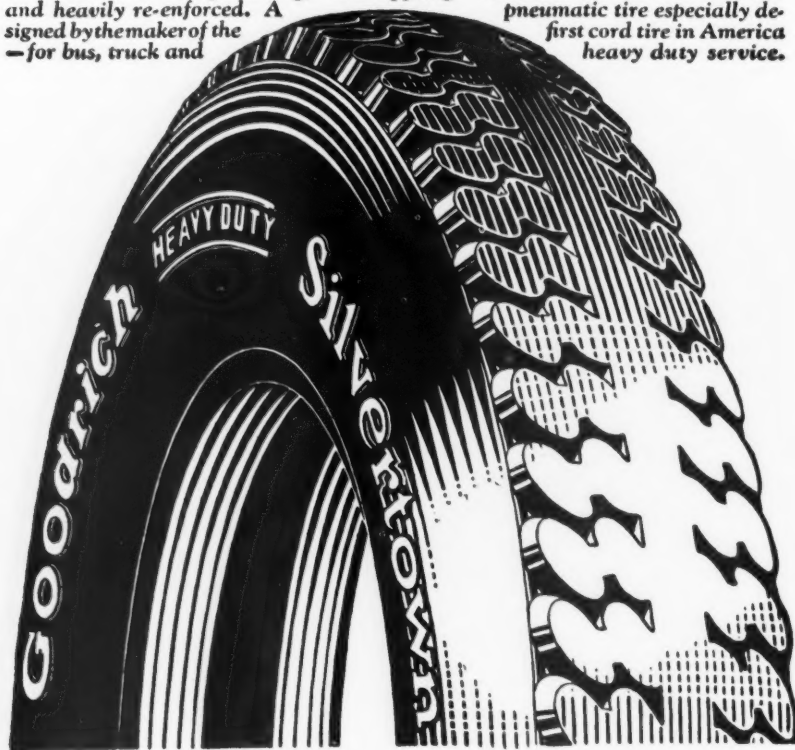
The Ready Mix body is designed for the Hug Chassis and is furnished as an integral unit. The simplicity of construction, absence of any levers or catches, the automatic raising and dumping, the bottom dump and remixing feature combined with the successful Hug chassis features make the new Hug body the most practical solution of wet concrete hauling.

Write for prices and full details of construction.

The HUG Co.

Highland, Illinois

Super dimensions—special rubber compound. Extra tough, heavy duty, anti-skid tread. Long-wearing, "non-rippling." Sidewalls, same stock as tread and heavily re-enforced. A pneumatic tire especially designed by the maker of the first cord tire in America—*for bus, truck and heavy duty service.*



— more profit than you think!

The whole matter of using tires on trucks is a matter of profit. Without them—no profit is possible. With them—profits depend upon the tires you use.

Goodrich Heavy Duty Silvertowns bring profits at every turn. Profits from savings in mileage costs. Profits from reduction in tire-changing delays. Profits from the habit of promptness which they help to build for the fleets which use them.

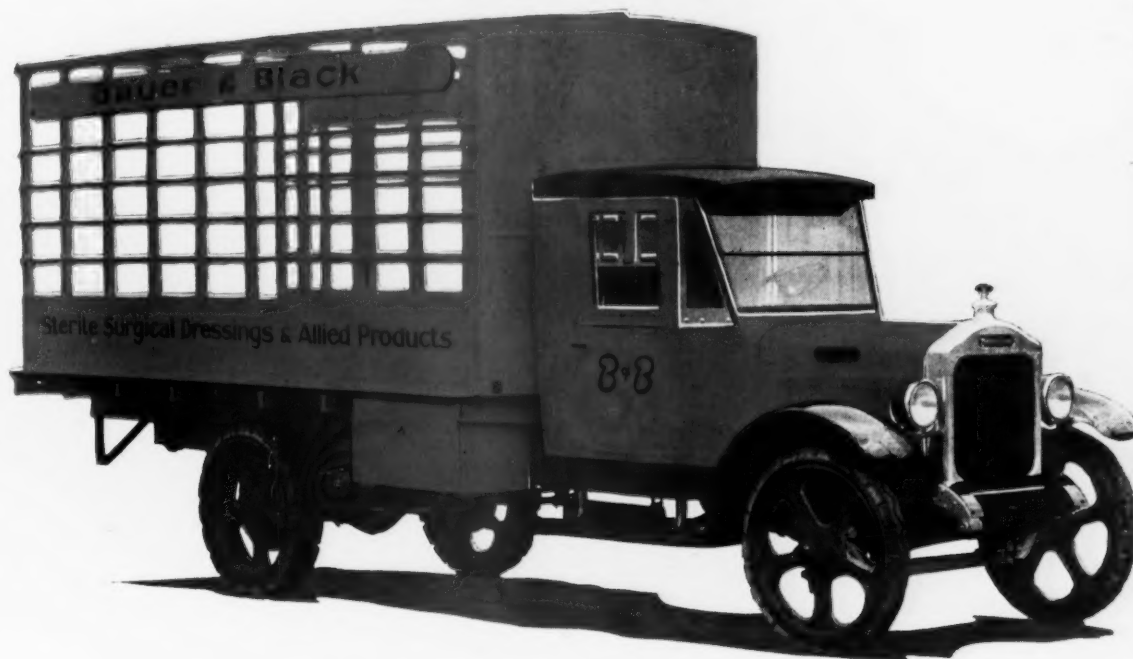
THE B.F. GOODRICH RUBBER COMPANY, Established 1870, Akron, Ohio
In Canada: Canadian Goodrich Company, Kitchener, Ontario

Goodrich

HEAVY DUTY Silvertowns

HIGH PRESSURE OR BALLOON

Profits for the Passenger Car Dealer



Dealers in passenger cars now find it imperative to sell cars to meet every purse and every driving requirement. But even this plan has not removed that seasonal slump.

Any dealer's business of selling transportation is only half complete when the freight transportation field is ignored.

Truck sales are based on consistent performance rather than price or trade-in. One sale brings another from the same buyer—perhaps ten sales before the year is over.

Gotfredson Trucks are designed to fit this very market—are sold on their performance merits. They are manufactured by a substantial organization of recognized automotive engineers.

Ask for the Gotfredson sales plan and details of models, if your territory is open.

Write direct to
GOTFREDSON TRUCK CORPORATION
Detroit

—or any of the following Gotfredson dealers:

Newark, N. J.	Chicago, Ill.	Toledo, Ohio
Pittsburgh, Pa.	Philadelphia, Pa.	Denver, Colo.
Detroit, Mich.	Cleveland, Ohio	Los Angeles, Calif.

Gotfredson Trucks

THERE IS A **Gotfredson** MODEL FOR EVERY COMMERCIAL HAULING NEED ~



There's dependable earning power in LYCOMING-powered buses

SPEED sufficient to maintain the most exacting schedules—
POWER in abundance to make an easy task of heavy going—
DEPENDABILITY, to give unfailing service day in and day
out, with a minimum of attention—

These are the factors that have led prominent makers to power
their buses with Lycoming Motors.

Lycoming-powered buses and trucks provide a wide choice,
covering the needs of every type of service. More than seventy-
five different models are illustrated and described in the free
booklet, "Powered by Lycoming"—each offering the lasting
dependability that is characteristic of Lycoming Motors.

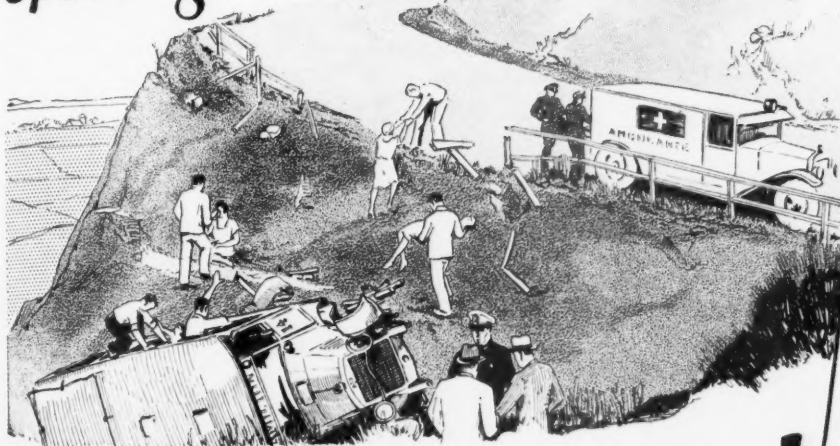
LYCOMING MOTORS

LYCOMING MANUFACTURING COMPANY, *Makers of Fine Fours, Sixes and Eights-in-Line*, WILLIAMSPORT, PA.
Export Department—44 Whitehall Street, New York City

MEMBER OF MOTOR TRUCK INDUSTRIES, INC., OF AMERICA

FOR NINETEEN YEARS BUILDERS OF QUALITY PRODUCTS

10 Die, 40 Hurt *Speeding Driver Loses Control!*



PIERCE prevent speeding!

There's a good deal more to speeding than an occasional smash-up. Tragedy serves to drive the lesson home—but the ungoverned bus is constantly stalked by danger.

Your driver is given a bus—a highly rated motor—and a schedule. Being human the man at the wheel likes to alternately loaf and speed. He lags on some stretches, knowing that he can force the machine to "make up time" later. And right here is where accidents happen. Here is where danger enters—not only to passengers but to the bus itself!

Steady performance is what you bus owners seek. You want your machine handled with care so they last; you want the motor treated with consideration—you don't approve of motor-racing and straining any more than the authorities approve of dangerous speeding.

Play safe—with motors sealed to deliver maximum power—at a predetermined speed within the safety limit. Pierce Governors are doing this job for thousands of bus owners and doing it well. Their motors last longer, use less gas and oil, and are free from many ills caused by reckless or careless driving.

Get this free booklet

The problem of motor speed-governing is frankly discussed in our free booklet No. 44—yours for the asking.

THE PIERCE GOVERNOR CO., Anderson, Indiana

"World's Largest Governor Builders"

Pierce Governors

"Get the Most  *from Motors"*

Today

—By Arthur Brisbane—

Ten were killed, forty-one injured, when a motor bus fell over a cliff. Passengers said the driver, going too fast, lost control.

Control of speed should be a public regulation on all public omnibuses, and might well be applied to private automobiles. A simple device, sealed up by the authorities, would control maximum speed (except down hill) without diminishing power for hill climbing in any way.

Why leave speed and the lives of passengers to the discretion of a driver in a hurry to get home?

Reprinted permission New York American

wobble and shimmy ...wobble and sh

THE snake dance of the wobbling tire takes the heart out of mileage—

And a lot of joy out of the gate receipts.

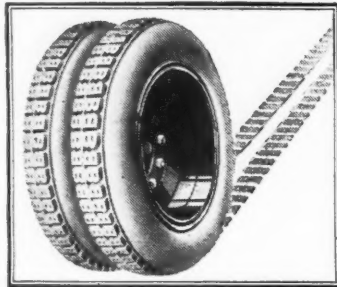
How can you get away from it? By making *sure* that you get Budd Duals!

Budd Duals have had the wobble licked from the start.

More than 100,000 buses and trucks have failed to get a wobble out of a Budd Dual.

That accounts for the phenomenal tire-mileages. The wheels are **TRUE**!

POSITIVE PERMANENT ALIGNMENT



GREATER TIRE MILEAGE

YOU GET FROM 15,000 TO 20,000 MILES from a set of tires on Budd Duals—

Because Budd Duals *always* run true as an arrow—

They can't get out of alignment to wobble and shimmy—

They have no demountable rims, no rim clamps—

So you can't get a tire on crooked.

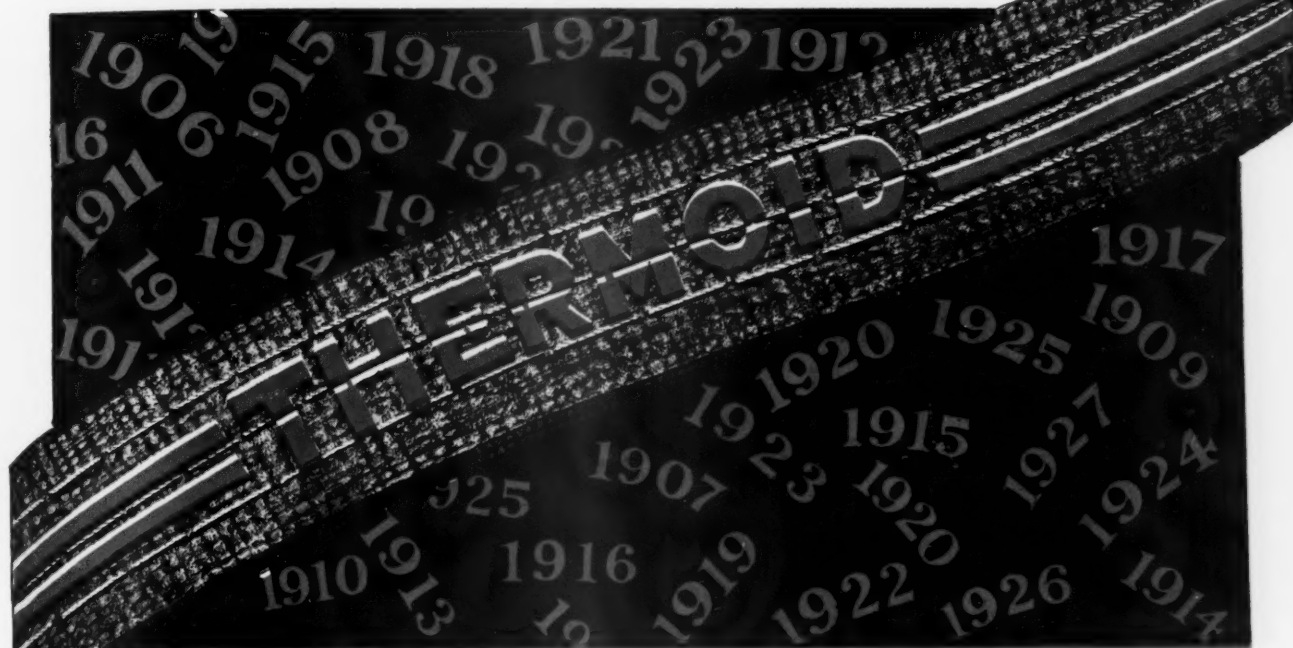
This positive, *permanent* alignment is made possible by Budd Dual design.

BUDD

WHEEL COMPANY

Detroit

-and back of it is 20 Years of Dependability



THE Thermoid of 1927 is as far superior to the Thermoid of 1907 as the modern motor car is to the original "horseless carriage." Thermoid has moved with the times. The Thermoid of 1907 was known as the most reliable brake lining of its day—so was the Thermoid of 1917. So is the Thermoid of 1927.

Many a product that looked like a world beater has proved only a flash in the pan. Fleet owners have tried out many brake linings only to go back to Thermoid. Time is a great laboratory. Only the really reliable product can stand the test of the years.

Thermoid offers the fleet owner the **UTMOST IN DEPENDABILITY** backed by an honorable record of over 20 years.

THERMOID RUBBER COMPANY, Factories and Main Offices, TRENTON, N. J.

Makers of Thermoid Interwoven Brake Lining, Thermoid and Rexoid Transmission Lining, Thermoid-Hardy Universal Joints, Thermoid Radiator Hose and Mechanical Rubber Goods

**The All-Weather
Brake Lining**

Thermoid *Hydraulic Compressed* **Brake Lining**

**"For Short Stops
and Long Service"**

ZENITH

Truck owners and operators are keenly interested in Power. It requires Power to drive a stock car over 96 m.p.h. on the Atlantic City speedway or to win over the field climbing Pike's Peak. Zenith-equipped Stutz cars came in 1-2-3 at Atlantic City and were the winners in both special and stock car events at Pike's Peak on Labor Day, 1927.

Zenith carburetors are also standard equipment on 60% plus of all models listed in the C. C. J. Commercial Car Specifications for August.

You are cordially invited to visit the Zenith Exhibit, Space 437, at the Annual Convention of the American Electric Railway Association, at Cleveland, October 3-7.

ZENITH-DETROIT CORPORATION

Branches
NEW YORK
CLEVELAND
CHICAGO

Manufacturer of
ZENITH CARBURETORS
Over 1200 Service Stations

Member Motor Truck Industries, Inc., of America

MAIN OFFICE
and FACTORY
DETROIT
MICHIGAN

More and more passenger car dealers are adding a line of trucks



"Buddy" Stewart
1-Ton
6 Cylinder
\$985 Chassis

~ they offer a steady
year round income

THE constantly increasing number of passenger car dealers who are adding a line of trucks is recognition of the increased profit possibilities offered by a line which has no seasonal slumps.

The truck industry is almost free of the complications that beset the passenger car field. Truck sales are constant, steady, year-round. Are you awake to this opportunity.

Stewart trucks are famous for economy, long-life and easy steering. They sell faster because their reputation as America's Greatest Truck Value is already established in 500 American cities and 43 foreign countries. An increase of 47% in shipments and 50% in orders over 1926 tells its own story. Write for further information.

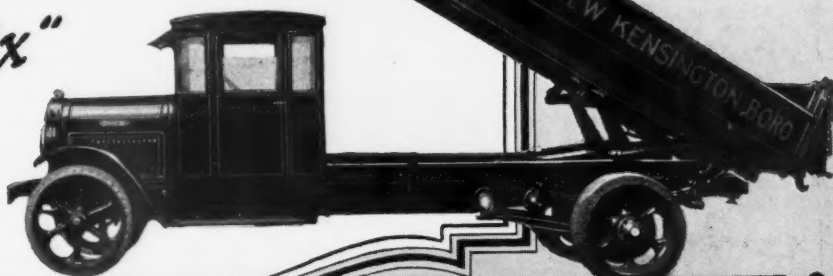
STEWART MOTOR CORPORATION
BUFFALO, N. Y.

EXPORT BRANCH 90 WEST ST., (Dept. 3) NEW YORK CITY
All Codes Used

Stewart

MOTOR TRUCKS

"Stewart Big Six"
2½-3 Ton
Timken Worm Drive
\$3200 Chassis



MODELS

- ¾ Ton
6 Cylinder, \$895, Chassis
- 1 Ton
6 Cylinder, \$985, Chassis
- 1¼ Ton
4 Cylinder, \$1245, Chassis
6 Cylinder, \$1370, Chassis
- 1½-2 Ton
4 Cylinder, \$1695, Chassis
6 Cylinder, \$1795, Chassis
- 2-2½ Ton
6 Cylinder, \$2490, Chassis
- 2½-3 Ton
6 Cylinder, \$3200, Chassis
- 3½-4 Ton
6 Cylinder, \$4200, Chassis
- Also 18
Passenger Bus Chassis
All prices f.o.b. Buffalo

Hundreds of
Stewart fleets
have grown
from a single
Truck

Stewart Trucks have won by costing less to run

for Economical Transportation*The*

World's Lowest Ton-Mile Cost for Every Line of Business

Whether the prospective purchaser wants a truck for fast, economical delivery over city streets—

—whether his problem is the transportation of ton-loads over all types of highways—

—or whether he needs a haulage unit for any sort of special purpose—

—the Chevrolet dealer can supply a body type exactly suited to his requirements . . . mounted on a chassis that provides the world's lowest ton-mile cost.*

This great economy and wide adaptability have made Chevrolet the world's leading gear-shift truck for buyers in every line of business.

As a result, Chevrolet dealers everywhere are enjoying a constantly increasing volume of truck business, in addition to their unusual volume on passenger cars—

—a double-profit dealership that has made the Chevrolet franchise one of the soundest and most desirable in the automotive industry.

CHEVROLET MOTOR COMPANY, DETROIT, MICHIGAN
Division of General Motors Corporation

*Ton-mile cost is the cost of transporting a ton of material one mile—or its equivalent.



½-Ton Truck

\$395

(Chassis Only)

1-Ton Truck \$495
(Chassis Only)

1-Ton Truck \$610
Chassis with Cab

All prices f. o. b. Flint, Mich.

THE WORLD'S LARGEST BUILDER OF GEAR-SHIFT TRUCKS

Ignition that maintains service —water-proof, dust-proof Splitdorf Model "B" Magneto

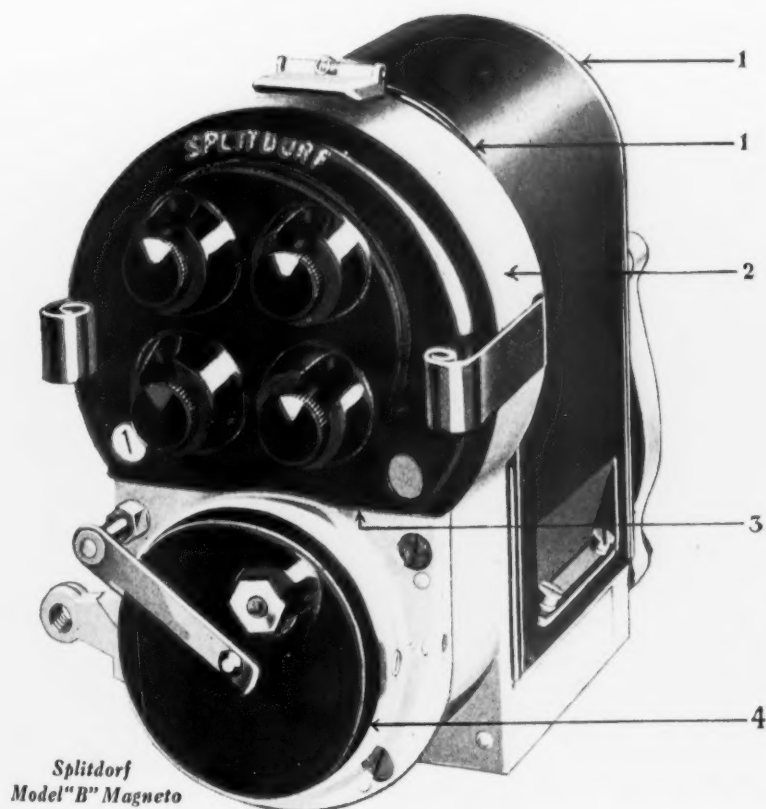
SPLITDORF Model "B" Magneto provides completely dependable ignition for the profitable, uninterrupted operation of buses, trucks and tractors. This magneto is shielded against dust and water by special construction—carefully machined, close-fitting joints; seals of oiled felt; grooved covers. It will maintain service through the wettest weather and operate continuously in dust and dirt with unimpaired efficiency.

This instrument operates on an improved inductor principle and produces a hotter spark at slow speeds than any other magneto. There are no rotating primary and secondary windings subject to damage

by excessive speed and vibration. A correct condenser balance prevents arcing at the contact points. The provision of both 20 and 30 degree timing range slots is an exclusive feature.

Splitdorf Model "B" Magneto is an ideal ignition instrument for buses, for trucks on excavation work, for tractors, for machines traveling routes where there are no service facilities, for any duty that requires reliable ignition.

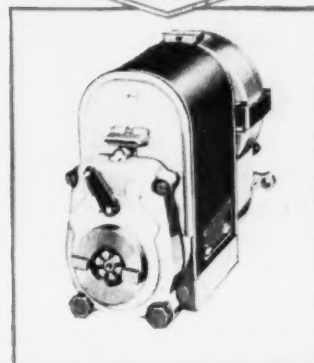
Made for one, two, four and six cylinder engines. Write for complete information. Splitdorf Electrical Company, 392 High St., Newark, N. J. *Subsidiary of Splitdorf-Bethlehem Electrical Company.*



1. Magneto cover is fitted into grooves to exclude dust and water.
2. Surfaces are accurately machined and finished for a perfect fit.
3. Distributor block cover, held in place by spring clamps, is fitted with oiled felt to make a dust-proof, water-proof seal.
4. A strip of oiled felt prevents dust and water entering the breaker compartments.

Reg. U. S.
Pat. Off.

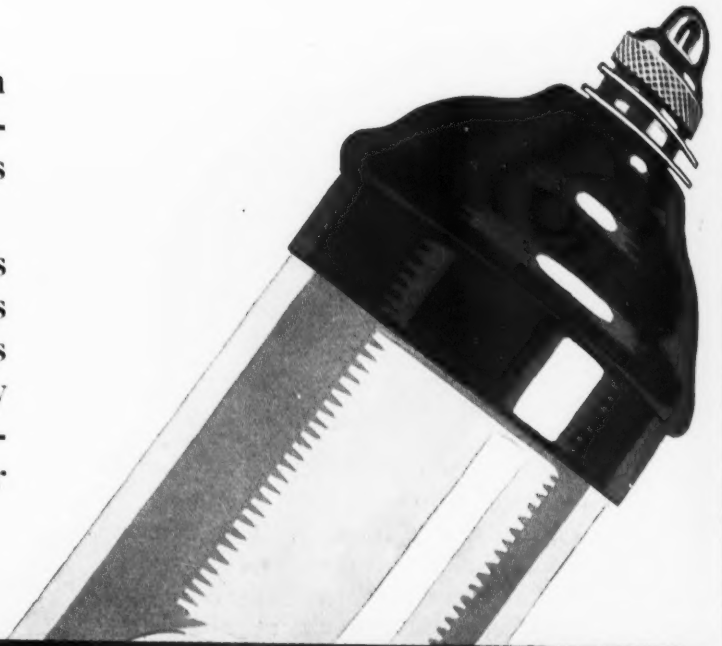
Established
1858



HIGH-GRADE SPLITDORF SPARK PLUGS FOR
EVERY ENGINE ARE FIFTY CENTS EACH

AIR — and air *alone* — can absorb, and thus practically eliminate road shocks and vibration.

These two destructive forces cost truck and bus operators who ignore them hundreds of thousands of dollars every year in unnecessary maintenance expense and repair bills



GRÜSS
Sleeve Type
AIR SPRING



WESTINGHOUSE
Piston Type
AIR SPRING

THE SHOCK ELIMINATORS FOR TRUCKS-BUSSES-PASSENGER CARS



AIR springs float the bus or truck chassis on cushions of air. These air cushions absorb road shocks and vibration, prevent twisting and wrenching of frame, eliminate shifting of load and damage to cargo, insure supreme riding comfort regardless of road conditions.

Thousands of truck and bus operators in all parts of the world have found the savings thus effected make air springs the greatest dividend payer they have in connection with their equipment.

The CLEVELAND PNEUMATIC TOOL CO.
Cleveland, Ohio



the World's Greatest Truck Makers **use DAYTON STEEL WHEELS**

No. 4 **Durability**

Yes sir, there's a difference between Strength and Durability. A wheel may have strength—great strength—but it's got to be Durable—it must hold its strength year after year, to withstand shocks, impacts, sidethrusts, rough usage and exposure to heat and rain. The amazing Durability of Dayton Steel Wheels is known wherever motor trucks are used. Here is the way the Dayton is built to hold its brute strength: The patented design of the Dayton so distributes the metal as to prevent undue localization of stresses. The large radius fillets where spokes join hub and felloe, aid in distributing the stresses so as to produce a wheel of great Durability.

The electric furnace steel from which Daytons are cast in one piece is not affected by weather, cannot warp and spokes cannot become loose or split.

45 Patents Owned by Dayton

Every major improvement in steel wheels has come first in Dayton Steel Wheels. Not less than 45 patents are owned by the Dayton Steel Foundry Company. We are specialists in the manufacture of steel wheels. Three out of every five steel wheels made today are Dayton Steel Wheels. Specify them on your next order.

Deliveries are timely and steady

THE DAYTON STEEL FOUNDRY COMPANY, DAYTON, OHIO

Dayton

The Mark of a Good Wheel

Our new catalog will
be sent on request.

STRENGTH • LIGHT WEIGHT • TIRE ECONOMY • DURABILITY • ACCESSIBILITY • APPEARANCE



Federal Franchise acts!

"Give the Public What it Needs"

Half the secret of being a successful dealer lies in having just what your customers need.

You save time — you make more sales per 100 prospects — your present salesmen become "super-salesmen" if you have the right merchandise.

With the Federal line, you have fast Fours and Sixes, pneumatic tires and overspeed transmissions for buyers who want speed. You have either light or heavy duty chassis—from 1 to 7½ tons capacity. You can offer long or short wheelbase, worm or bevel gear drive, and other options to suit the special needs of every customer. And you have the type of truck toward which buyers are turning — trucks that are designed, built and powered as TRUCKS.

Never has any other truck manufacturer offered such wide variety—nowhere else can you find a "custom-built" service at volume prices. And because of 17 years of experience in the truck field exclusively, Federal leads the way in design as well as in manufacturing efficiency.

Write for booklet, "Federal Franchise Facts", that gives full details of the money-making possibilities in the Federal line. Let us tell you of our sales-building plans. See what big profits Federal dealers are making. Send today for your copy.

FEDERAL MOTOR TRUCK COMPANY
5786 Federal Avenue Detroit, Michigan

FEDERAL

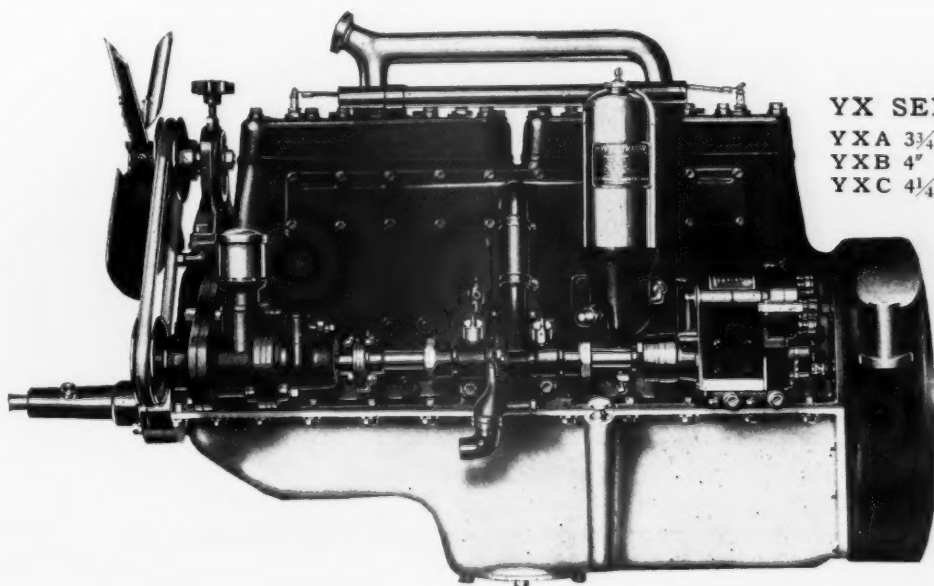
ALL SIZES TRUCKS FOURS & SIXES

Mercur

UNIVERSAL approval has been earned by Hercules Engines. Years of severe service and tens of thousands of users have proven the lasting economy of Hercules performance.

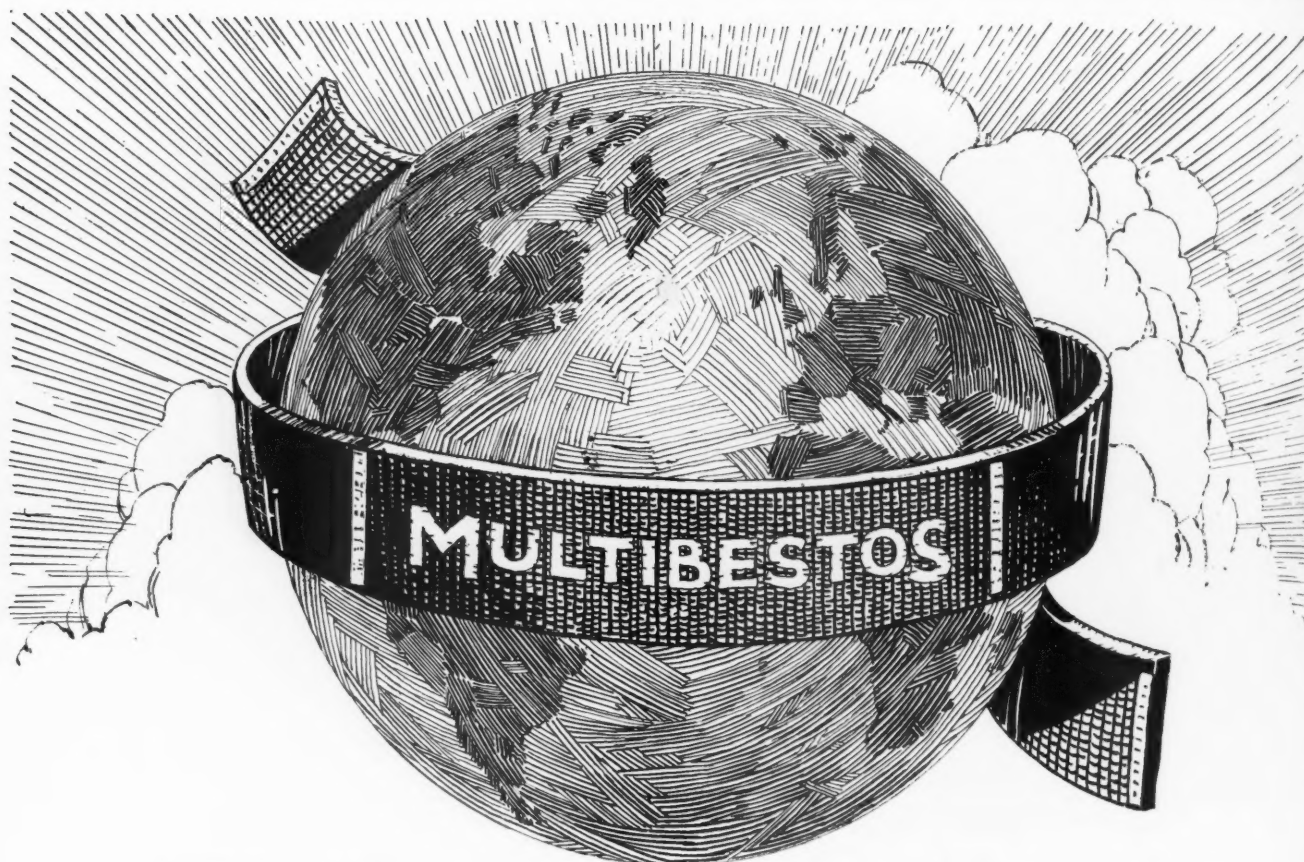
The six is typically Herculean. Characteristically compact, simple, and rugged, the YX series in three models assures superior six-cylinder performance wherever six-cylinder power is desirable.

HERCULES MOTORS CORPORATION
Canton, Ohio, U. S. A.



YX SERIES

YXA $3\frac{3}{4}" \times 4\frac{3}{4}"$
YXB $4" \times 4\frac{3}{4}"$
YXC $4\frac{1}{4}" \times 4\frac{3}{4}"$



All 'Round the World

Multibestos Brake Linings are now sold practically everywhere that automobiles are found. Not only the "regular" type of Multibestos, woven especially for passenger car brakes, but the heavy duty linings—Busduty and TaxitruX. Because in the Multibestos line one finds not only a lining of the exact dimensions required, but of the exact *texture* to co-operate most efficiently with his particular type of brake drums.

We will be glad to send you data showing savings made by truck owners using Multibestos Linings, savings that include time formerly lost in lay-ups for relining.

MULTIBESTOS COMPANY, WALPOLE, MASS., U. S. A.

MULTIBESTOS

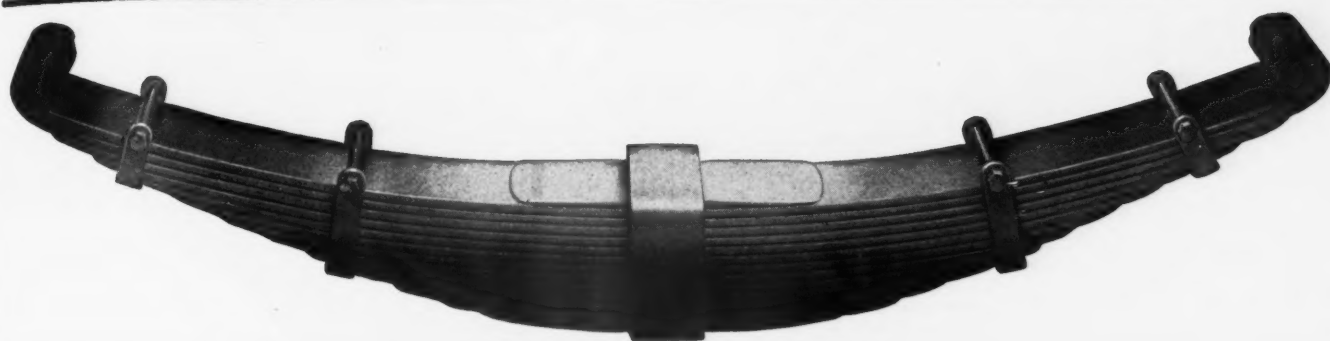
REG. U. S. PAT. OFF.

BRAKE LININGS

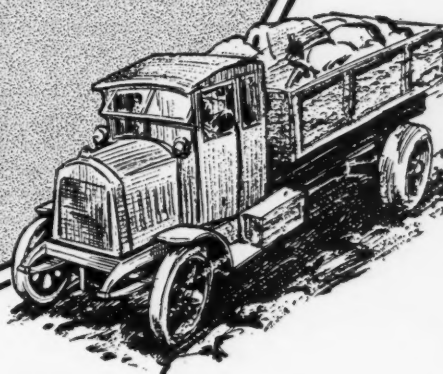
TAXITRUX For All Heavy-Duty Brakes **BUSDUTY**



THERE IS MORE IN SPRING DESIGN THAN MEETS THE EYE



80 Years of
**KNOWING
HOW**



In these days of keen competition manufacturers can't afford to have their vehicles condemned because one part fails to do its job.

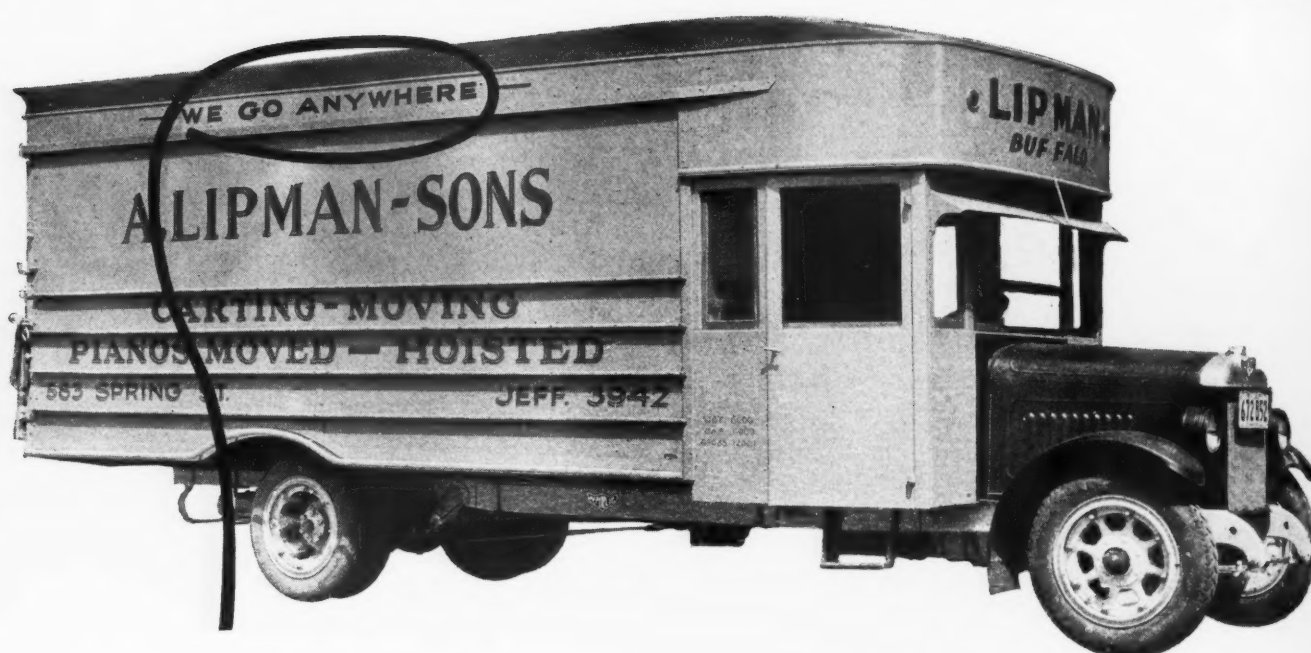
Before you specify the spring suspension for your new trucks or buses let us help you solve your spring problems. Our wealth of experience is at your service.

SPRING~PERCH CO.

STRATFORD, CONN.

Makers of Springs Since 1843

CLARENCE F. TOLLZIEN
Direct factory representative for Michigan and Ohio
Office: 5-251 General Motors Building, Detroit, Mich.
Phone: Empire 7298 Detroit



“We Go Anywhere”

Lindbergh's famous “we” included his plane. When A. Lipman-Sons of Buffalo say “We Go Anywhere,” they mean their big Model 62 Republic truck—fit to be the pride of any fleet.

Any Republic goes *anywhere*—a fact most strongly established in the very industries whose life-blood is their transportation. Republics have the power and durability for continuous wide-open operation. But Republics have economy throughout the throttle range! On the cost sheets the biggest Republic trucks seem like small ones. In the ton-mile records smaller Republic trucks rate like big ones.

This is definitely accounted for by tangible, provable betterments in carburetion, combustion, cooling, axles, drive and braking. The most modern truck engineering is vouched for by the veteran large-scale experience of the Republic institution. Its resources, including the truly national system of branches and distributors, permanently back every Republic truck on the roads.

REPUBLIC MOTOR TRUCK CO., INC.
ALMA, MICHIGAN

A Complete Range of 4-Cylinder and 6-Cylinder Models

REPUBLIC

Yellow Chassis **TRUCKS**



The Hoopes-Parker Wheel

Light
Weight
Low Cost
Accuracy
of Tire
Mounting
Heat
Dissipation
Simplicity
of
Operation

A SPIDER type of wheel with hub cast integral for use on trucks and buses taking single and dual pneumatic tires.

These wheels have been used successfully for a number of years by prominent motor truck and bus manufacturers, and for dual tires have the following distinct advantages:

Light Weight

Low Cost

Accuracy of tire mounting—Tires can only be mounted to run perfectly true.

Heat dissipation—Both tires and brakes are cooled owing to the free circulation of air fanned by specially constructed spokes.

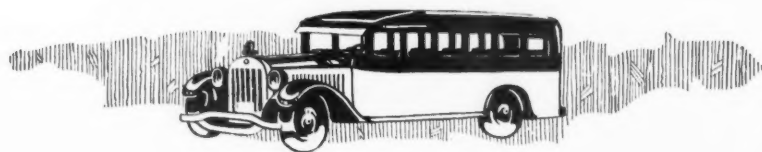
Simplicity of operation—By the removal of eight nuts and eight clamping devices, rims carrying both front and rear tires are released and can be easily removed from the wheel.

Manufactured by

1867

Hoopes, Bro. & Darlington, Inc.
WEST CHESTER, PA.

1927



Lubrication engineers and others interested in effective and economical gear, bearing and general bus lubrication should be sure to see

LUBRICANT PERFORMANCE *VISUALIZED*

At Booth No. 683

This exhibit has attracted hundreds to our convention booths and is accepted by audiences as a noteworthy educational achievement.

It proves in a most convincing manner the superiority of properly graphited lubricants

vs.

Non-Graphited Lubricants of Recognized Standing.

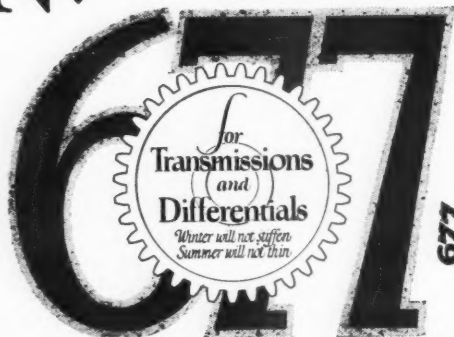
DAILY—October 3-4-5-6-7

46th Annual Convention

American Electric Railway Association

Cleveland, Ohio

No.



**Joseph Dixon Crucible
Company**

Jersey City

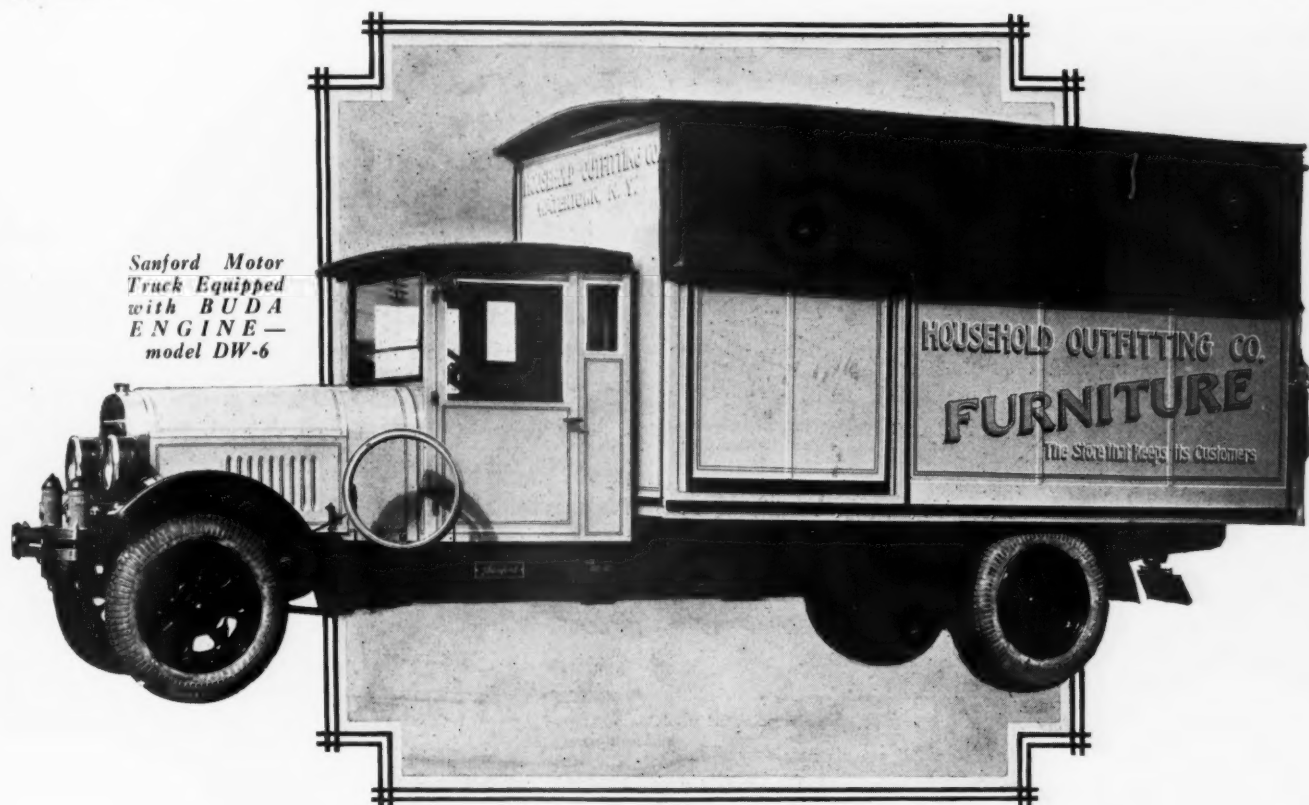


New Jersey

1827

One Hundredth Anniversary

1927



BUDA POWERED TRUCKS Are Best in Everyday Use

The Sanford Motor Truck is one of many fine trucks powered by Buda. You will find these trucks throughout the world standing up under the grueling abuse of everyday use. They never falter in their task, providing long life and complete satisfaction to thousands of fleet owners.



Buda 4 and 6-cylinder engines provide — LOW UP-KEEP, HIGH POWER, ADEQUATE SPEED and DURABILITY. They are specially designed by automotive engineers to pull heavy loads with minimum effort and maximum economy. Buda powered trucks and buses find increasing favor in everyday use.

Our engineers gladly will consult with you.

THE BUDA COMPANY
HARVEY *Chicago Suburb* **ILLINOIS**

Members of the Motor Truck Industries, Inc., of America

ESTABLISHED



1 8 8 1



Having, or being able to get quickly, the right bronze bushing when you need it is essential to profitable rebushing service. . . . That in part accounts for the country-wide swing to Johnson Bushings during the past year by dealers with an eye to greater profits from this work. . . . For the Johnson line is complete—even to types and sizes long since considered obsolete. . . . It is accurate—because all production is regulated by S. A. E. specifications. . . . And, finally, there are more than five hundred Johnson distributors so located as to be within easy reach of every dealer in small town or large.

JOHNSON BRONZE CO., NEW CASTLE, PA.
Chicago Kansas City San Francisco

Even the Box Meets Specifications

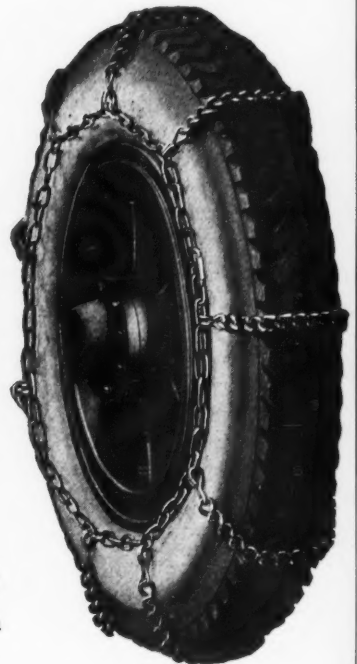
- 1—Each package contains a full set of the size and type of bushing required for a particular job.
- 2—Each package with clear and distinct label quickly tells the part number, car name and model and number of pieces in a set.
- 3—Each package, whether containing bushings for piston-pin, shackle-bolt, spring-eye, tie-rod, steering knuckle, generator or starting motor, is of convenient size and easy to handle.
- 4—Each package is made of substantial material and withstands the abuses common to shipping. Thus, is it in usable condition when it reaches its destination.

JOHNSON
QUALITY BRONZE
BUSHINGS

This Fleet Owner—Operating 378 Trucks—Says

About

Pyrene
TRADE MARK
Truck Chains



"We are pleased to say that the Pyrene Chains that we have purchased have proved very satisfactory. Our fleet of trucks are used on long inter-branch hauls, and Pyrene Chains have stood up very well."

Write for descriptive literature and our attractive selling proposition

Make Safety Certain

Pyrene Manufacturing Company - Newark, N. J.
Makers of Pyrene Fire Extinguishers and Chromine Radiator Freeze-Proof

The MARK of Quality known around the WORLD

In many countries—in fact in all countries where motor transportation is used—the name Gramm is known and respected for the reliable and economical service that trucks and coaches, bearing the Gramm emblem, are giving. A wide recognition such as Gramm's can mean but one thing—100% performance.

Dealers:—It will pay you to investigate our franchise.

GRAMM MOTORS, INC.

Executive Offices:
LIMA, OHIO

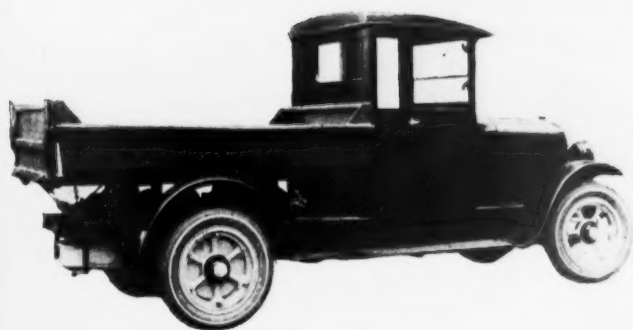
Factory:
DELPHOS, OHIO

Member of Motor Truck Industries, Inc., of America

Conclusive
Proof of
100%
Performance

SPACE 663
at the
A. E. R. A.
CONVENTION

GALION ALLSTEEL DUMP BODIES



WE GUARANTEE THESE MECHANICAL ADVANTAGES

1. Low Loading Height
2. Quick-Acting Hoist Mechanism
3. 43° Dumping Angle
4. Satisfaction and Service for One Year

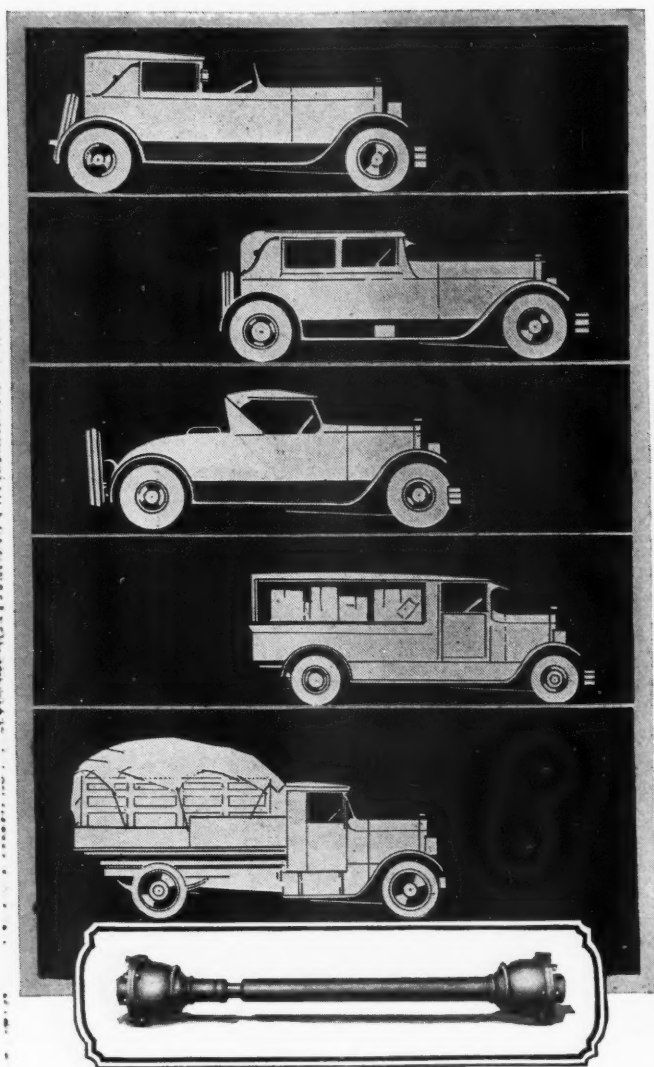
YOU ARE JUDGE OF YOUR OWN DESTINIES — WHICH SHALL IT BE? DECIDE NOW!

IF YOU HAVE NOT HERETOFORE TAKEN ADVANTAGE OF OUR PRODUCT—DON'T LOSE ANY MORE TIME—DO SO NOW!

SPECIAL BODIES FOR ALL TRUCKS FOR EVERY HAULING PURPOSE

THE GALION ALLSTEEL BODY CO.

GALION, OHIO, U. S. A.



Spicer Propeller Shafts

Manufacturers of vehicles built with a thought for the future are keenly appreciative of the long-lived trouble-free service given by Spicer Propeller Shafts.

Spicer
Propeller Shafts

SPICER MANUFACTURING CORPORATION

South Plainfield, New Jersey

6133-13



Sell 'Em Open-Faced Cost-Reckoning!

A Veeder Odometer puts truck operating costs on record in the open. It "comes clean" with the story of outlay.

No sizable leaks in operation or maintenance go unchecked when the costs-per-mile register on a

Veeder HUB ODOMETER

A "VEEDER" keeps before your truck owner (and driver) the records of *mileage* for comparison with his records of *expense*.

Costs for each item must be in keeping with the distance traveled—or he can readily find the reason why!

REGULAR MODEL (list) . . . \$20.00

FORD TRUCK and PAS-
SENGER CAR MODELS . . . \$15.00

Informative circulars on request

The Veeder Mfg. Co.
10 Sargeant Street Hartford, Conn.

Sales and Service Stations in

Atlanta, Ga.
Baltimore, Md.
Birmingham, Ala.
Boston, Mass.
Buffalo, N. Y.
Chicago, Ill.
Cincinnati, Ohio
Cleveland, Ohio
Dallas, Texas
Denver, Colo.
Detroit, Mich.
Indianapolis, Ind.
Kansas City, Mo.
Los Angeles, Cal.

Montreal, Quebec
New Orleans, La.
New York, N. Y.
Philadelphia, Pa.
Pittsburgh, Pa.
Providence, R. I.
Rochester, N. Y.
St. Louis, Mo.
St. Paul, Minn.
San Francisco, Cal.
Syracuse, N. Y.
Tacoma, Wash.
Toronto, Ontario
Washington, D. C.
—and other cities.



Buyers who are insistent on low prices for springs can find the fulfillment of their wishes in Mather scientifically heat treated springs—provided, however, they are willing to measure price saving in terms of dollar-for-dollar value.

THE MATHER SPRING CO., TOLEDO, OHIO

Makers of scientifically heat treated springs for automobiles.

NEW MODELS



DeLUXE COUPE



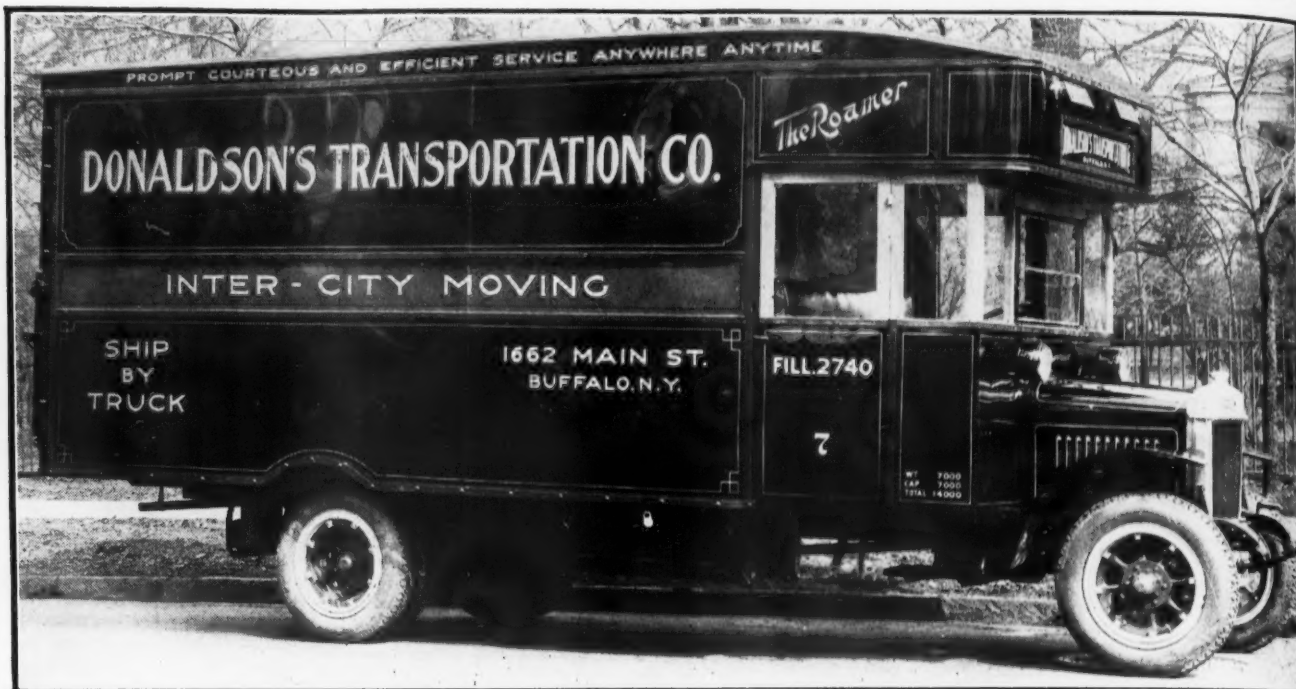
R & S SLIDING DOOR

The 1928 Series DeLuxe Coupe and R & S Sliding Door Models are now ready. A new, strictly up-to-date design, combining more comfort, and of vastly improved appearance. Twelve years of experience building cabs for the trade has taught us the need for sturdy construction. Complete specifications sent on request. Inquiries from Motor Truck Manufacturers and Cab Distributors solicited.

THE GENERAL WOODWORK CORP.

CINCINNATI, OHIO

READY NOW



POWER needs a firm grip to exert its full strength. Naturally then, today's truck must have maximum road traction to make the most of its engine horsepower.

Van Dual Wheels furnish double traction, assuring full use of engine power under all operating conditions, plus longer life for tires and trucks.

Twenty truck manufacturers are equipping with Vans, while scores of jobbers and dealers are capitalizing on the replacement demand.

Let us explain the Van Dual Wheel proposition fully. Write us today.

ERIE MALLEABLE IRON COMPANY
Van Metal Wheel Division, Erie, Pa.

VAN
DUAL WHEELS
For Original Equipment or Replacement

"WATCH FOR THE SIDE WHEEL"  "THE DITWILER MARK OF SAFETY"



CHEVROLET 2-TON TRUCK EQUIPPED WITH
HAND HOIST DUMP BODY

NO matter what hauling demands confront you, they can be effectively met with Efficient, Economical, Dependable, Ruggedly constructed Hercules-Ditwiler Saftee dumping equipment.

DITWILER MFG. COMPANY
GALION, OHIO
Manufacturers of
**HERCULES
DITWILER**

HAND HOIST
STEEL DUMP

Saftee

AUTOMATIC
BODIES

**if
your town
is a good
truck town
-it's a good
ATTERBURY
Town**

Complete line of
1 to 7 ton chassis
\$1295 to \$5650

ATTERBURY MOTOR CAR CO.
BUFFALO, N. Y. Established 1903

Speed

Speed and plenty of it. But it's speed without haste on your part when you use the Hall Hone for cylinder reconditioning, because with it you can do a better job in less time at less cost. Combines Spring and Solid pressure in one tool. Pressure may be changed instantly without even removing the drill from the Hone. Does the job in the chassis in less time than it takes to remove or replace motor for grinding alone. All that's necessary is to jerk the head, drop the base and pull the pistons. A few minutes honing per cylinder and the job's ready for fitting new rings, pistons, pins, etc. A few hours all told and the job is back in service.

One of the reasons why the Hall Hone is a faster cutting, smoother running cylinder tool is because it is—

Absolutely Rigid

It's impossible to hone a cylinder out of round or out of parallel with a Hall Hone. Its patented principle makes pressure equal at all times on all stones, while its rigidity prevents the stones following the taper of the cylinder. A round, true cylinder is the result. In every way the Hall Hone is—

Precision Built

The internal construction of the Hall Hone consists of precision ground cones, a part of the main shaft, actuating stone carrier arms and insuring utmost accuracy at all times. It does a precision job because precision built. That's why leading auto factories have approved the Hall Hone as service equipment for their stations everywhere!

Ask Your Jobber

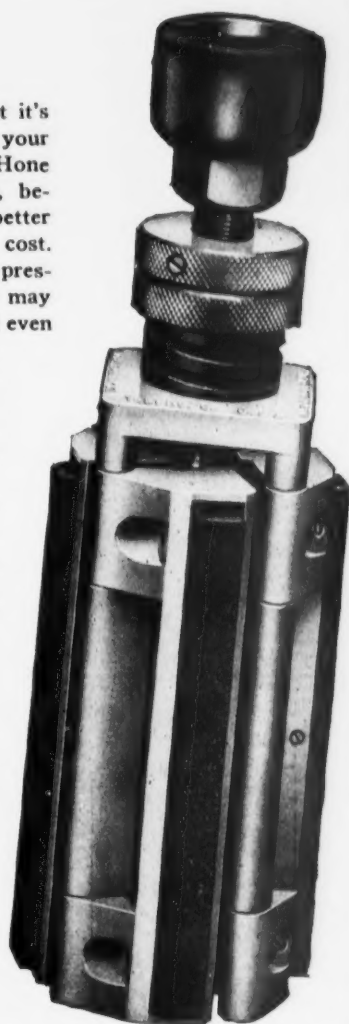
or send to us for complete information on the Hall Hone.

The Hall Mfg. Company

1604 Woodland Ave.
Toledo, Ohio

\$39.75
Why pay more
for less?

HALL Cylinder HONE



OHMER
HUB-
ODOMETER

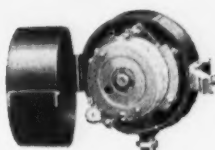


One More of the Many OHMER-Equipped Fleets!



OHMER
ODOMETER

May be placed under hood, on instrument board, on frame, or wherever wanted. Transmission driven. Large figures snap into full position.



OHMER
RECORDOGRAPH

Makes continuous indelible record of distance, speed, time, stops. Transmission driven.

LOOK FOR THIS SIGN



SEVERAL hundred trucks present a big problem in accounting. That's why the Jewel Tea Co., Inc., equipped their great fleet with OHMER Hub-Odometers. This device is easy and inexpensive to install, but it gives a precise record of mileage traveled.

Dependable Data

The record made by the OHMER Hub-Odometer is unalterable. The instrument cannot be tampered with. And even if the wheel is jacked up and spun backwards, the Hub-Odometer can't be "unwound." It adds—never subtracts—no matter which way the wheel turns. Every chance of error is prevented.

Furthermore, in spite of its fine and sensitive mechanism, the OHMER Hub-Odometer is unaffected by weather or any other conditions that the truck itself can withstand.

Plain Figures

The figures of the OHMER Hub-Odometer are always right side up, and easy to read. And all kinds of statistics can be compiled from the mileage records—such as exorbitant or insufficient travel, gas and oil consumption per mile, tire wear, unit delivery cost, and car depreciation. To know these things means economy of operation.

Don't Miss This!

You are invited to visit the OHMER Exhibit at the Cleveland A. E. R. A. Convention, October 1 to 7. OHMER Spaces will be 227 to 233 in Section B of Exhibition Hall, Cleveland Public Auditorium.

OHMER FARE REGISTER CO.
Dept. C, Dayton, Ohio

OHMER

Reg. U. S. Pat. Off. and Other Countries

An OPEN Letter to Motor Truck Users

INDIANA TRUCK CORPORATION
MARION INDIANA U.S.A.

It has always been our ideal that each Indiana Truck we build should meet in every way the demands placed on it by its owner and its driver. That one thought has been in the minds of our engineers, the men who actually build the trucks and those who sell them.

The advanced design and construction features of Indiana Trucks come as a result of knowledge, not of theory. Our designers have had practical experience in the field, studying the problems of individual operators under the most varied conditions possible. Our experimental department draws on the vast resources of a group of automotive specialists recognized as leaders in the industry. The key men in our plant are master craftsmen with long records of honorable service who take great personal interest in the success of Indiana Trucks.

These things have brought about the inbuilt stamina which enables Indiana Trucks to set outstanding records of performance. We've been building Indiana Trucks for eighteen years - growing steadily in that time. No Indiana Truck will ever be an orphan.

J. J. Stephenson
President

INDIANA TRUCK CORPORATION
1109 Indiana Park
MARION, IND.

INDIANA TRUCKS

Another Sale to "open cab" owners

The convenience of the open cab is its only recommendation. And last Fall many dealers profited by demonstrating that roomy Weatherproof Cabs possess this convenience *plus* features of snug comfort and safety. Bad weather is ahead. It only requires a couple of jobs on your floor to handle this business. Write for the dealer proposition.

Weatherproof Body Corporation
438 Shiawassee St., Corunna, Michigan

Truck Cabs
Passenger and
Commercial Bodies

Write for literature
and prices.

Weatherproof



TRIBLOC Chain Hoists

An improvement that makes
a Tribloc easier to use

It is an established policy of Ford Chain Block Company to adopt only those ideas which actual practice has shown will be to the advantage of our customers. If shop use and engineering tests over a long period of time demonstrate the value of a new idea, it is then incorporated into the construction of these good hoists.

This new Ball Bearing Hook, therefore, becomes a part of Tribloc Chain Hoists with the assurance that it has demonstrated its value. Let us show you this improved load hook. Let us tell you why the malleable iron and forged steel construction of Ford Triblocs mean a better, long-lived hoist.

Let us send you a catalog which shows the complete line of Ford Triblocs, Screw Hoists and Differential Hoists, as well as several special types.

FORD CHAIN BLOCK COMPANY

Second and Diamond Streets, Philadelphia, Pa.



The cut at left shows the standard Ford Tribloc in the 1/4- to 2-ton size.

2372-D



The Right Bearing for Every Car



Heavy Duty

In commercial car bearings, the paramount requirement is strength for heavy duty. B. C. A. Bearings will "stand the gaff" of prolonged use and hard driving. With proper lubrication they show no wear after years of service.

We are specialists in automotive bearings.

Bearings Company Of America
Plant Lancaster, Penna.
Detroit Michigan Office 1012 Ford Building.

Shuler Front Axles



for TRUCKS, MOTOR BUSES, TAXIS
and a Complete Line for
TRACTORS AND TRAILERS

Meeting the Demand

A close application to *one*
unit assures dependable
performance and economy
of operation.

SHULER design permits of
standardized maintenance.

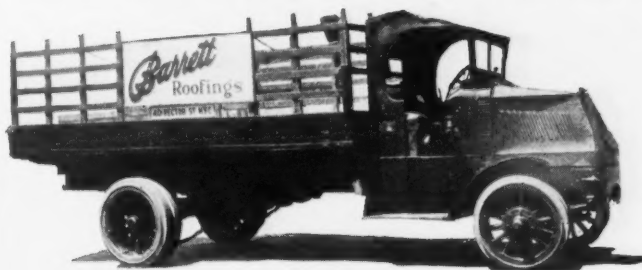
SHULER AXLE CO.

INCORPORATED

LOUISVILLE, KY.

Member of
Motor Truck Industries, Inc., of America

"LARGE FLEET OWNERS"



ADOPT THE "USTCOGRAPH"

MILEAGE

ACCURATE

DAILY
RECORD

GAINING
EVERY
MONTH

IDLE
TIME

OPERAT-
ING COST

AND
GOING
STRONG



Large operators who have given this
instrument

RIGID TESTS
are equipping their entire fleets.

*This is Self Evident of 100%
Satisfaction*



**The Ustco
Odometer**

Clear, convenient
mileage record—forward
and reverse. Any location on
dash, chassis, cab or
under hood.



Hubodometer for Fords

*Some Dealers
Territory Open.*

*Write to
Our
General Sales
Offices*



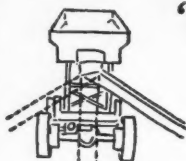
**The
Ust-Clock**

Supplies a daily,
written, accurate
record. Shows motor
idling, travel and
idle time—with an
8-day clock!

Ustco

for Time, Distance and Fuel

U. S. RECORDING INSTRUMENTS CORP.
555 WEST 57th STREET NEW YORK, N. Y.



Lifts to 12 ft. front,
8½ ft. rear. Swivel
Spout chutes load in
ANY desired direc-
tion.

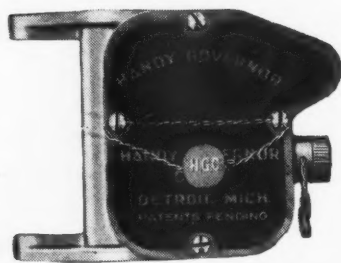
"Hi-lift" and Swivel Spout

Parking parallel to the curb—a swivel spout that chutes coal in any desired direction—are saleable ideas. You can sell more trucks to coal companies on these features of the Moore Hi-Lift Bodies. Fit any 1 to 5-ton truck. We cooperate—write for our sales plan.

Moore Body Co., Reading, Pa.

MOORE

"Hi-lift" Hoists and Bodies



POSITIVE

Set screw adjustment permits you to positively govern, to any desired speed, with the Handy. Adjust, seal and turn over to your customer a truck or bus that simply can't be abused by over-speeding.

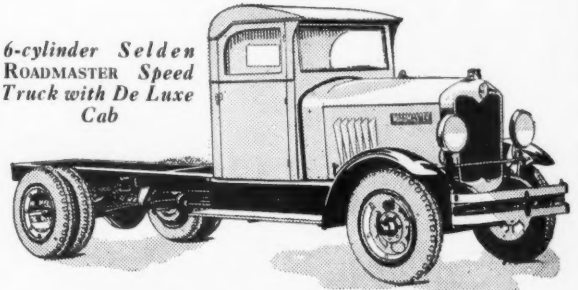
Fifty manufacturers specify Handy as preferred equipment. Over 200,000 now in use. Ask us for full information regarding models for your particular requirement.

HANDY GOVERNOR CORPORATION
3926 W. Fort Detroit, Michigan

HANDY GOVERNOR

45 Miles Per Hour With 3 Tons The New Selden ROADMASTER

6-cylinder Selden
ROADMASTER Speed
Truck with De Luxe
Cab



WHILE an ordinary heavy-duty truck with solid tires is making one round trip, delivering one load of 4 to 5 tons at 20 miles per hour, the new Selden ROADMASTER makes 2 round trips, delivering two loads of 3 to 4 tons each at 45 miles. During any given time the ROADMASTER hauls 50% to 60% more load for you.

Write for free literature.

Selden Trucks

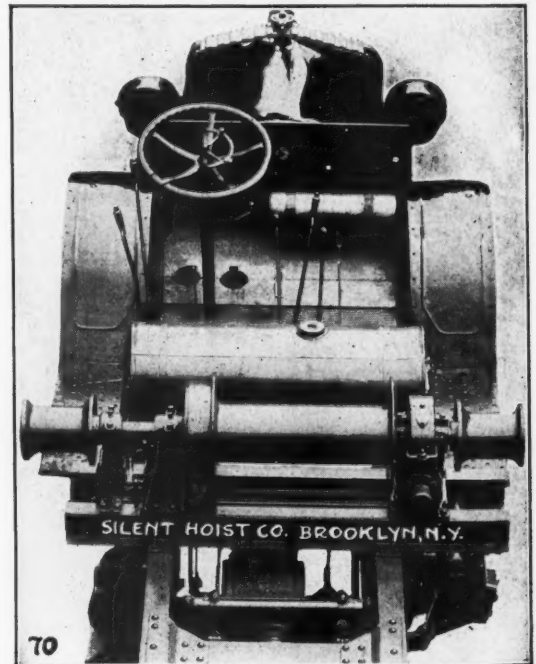
Selden Truck Corporation, Rochester, N. Y.

Factory Branches:

Long Island City, N. Y., Boston, Mass., Tulsa, Okla.

GET YOUR SHARE

of the Public Utility and Contractors' Business by Quoting on "Silent Hoist" Winch and Derrick Equipped Motor Trucks



The Model TA All-Steel Jaw-Clutch Drum Winch has several hoisting speeds, and lowers by power. It is very popular with the telephone, gas and electric companies for cable pulling and pole setting, etc.

The complete line of "Silent Hoist" Truck equipment includes: Vertical and Horizontal Capstan Winches; three sizes of Friction Drum Winches; two Patented Pole and Transformer Setting Derricks

BULLETINS, PRICES AND DISCOUNTS SENT ON REQUEST

SILENT HOIST Winch and Crane Co., 762 Henry St., Brooklyn, N. Y.

Power

Scientific design, generous proportions, and quality construction give the Schacht engine an extra margin of power that keeps the job moving, makes hard work easy, saves repair costs.

SCHACHT TRUCKS

1½ to 7½ Tons Capacity
A truck for every purpose

Write for the four other reasons why careful buyers "Choose a Schacht."

THE LeBLOND-SCHACHT TRUCK CO.
Pioneers in Motor Transportation
Cincinnati, Ohio

Branches: Long Island City, N. Y.; Newark, N. J.; Providence, R. I.; Little Falls, N. Y.; Toledo, Dayton, Columbus, Ohio; Louisville, Ky.



Only Highway Can Do This—

Four-Wheel-Circle Steer-Reversible

2 TON — \$ 550
4 TON — \$ 750
6 TON — \$1050

because Highway Trailers are manufactured trailers—and because a manufactured product bears but one profit and one overhead charge. Write for bulletins.

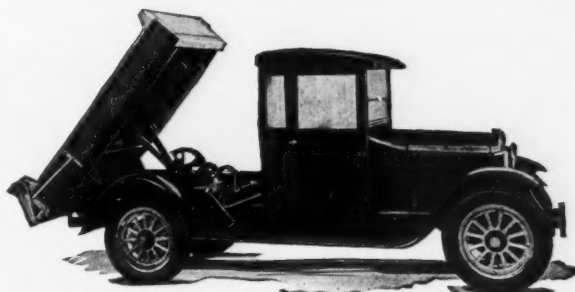
HIGHWAY TRAILER CO.

EDGERTON

WISCONSIN

The World's Largest Trailer Plant.

Goes Great on G-Boy



ON all Graham Brothers Trucks including the famous G-Boy, Hughes-Keenan Steel Dump Bodies deliver the sort of service it pays to sell. They broaden the market, increase satisfaction and add materially to your income. Scientifically built of heavy steel plates, electrically welded and reinforced. Husky underbody hoists, smooth in operation and guaranteed against breakage. In every way worthy of the happy combination they make with any Graham Brothers Truck. 1 Yd. for G-Boy, 1½ Yd. for 1½ ton, and 2 Yd. for 2 ton. Write for complete information.

THE HUGHES-KEENAN COMPANY
Drawer 398 Mansfield, Ohio.

HUGHES-KEENAN
Steel Dump Bodies

DAY-ELDER MOTOR TRUCKS

A Model for Every Trucking Purpose

FOUR CYLINDER
— 1½ to 6 Tons —
SIX CYLINDER
— 1, 2 and 3 Tons —

Dealers:

We can offer you an unusual sales plan which assures you increased profits

Write for details today.

National Motors Mfg. Co.

464 COIT STREET,

IRVINGTON, N. J.

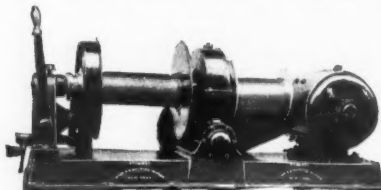


FIFTY YEARS OF SATISFACTION, SERVICE AND QUALITY IN STIMMEL WINCHES, THE FINEST MADE

Illustrating one style that has won us customers, and held them. Of course, there are many other styles.

Winches of every description, hand, electric, and power driven, for all purposes.

Just specify the purpose, and we will recommend the proper winch. A Stimmel Winch on your truck will bring you additional business.



This type is made in several sizes and styles, for either gasoline or electric trucks, for industrial purposes, or portable, with motor. This style is now being used by the leading central stations; also house-movers, truckmen and riggers. The New York Edison Co. uses this winch exclusively.

Write for bulletins and prices to

STIMMEL WINCH AND MACHINE WORKS

539-545 West 22nd Street, New York City

BLOOD-BROTHERS MACHINE COMPANY



ALLEGAN, MICH.

A Blood-Brothers Universal Joint thrives on half the attention required by other joints.

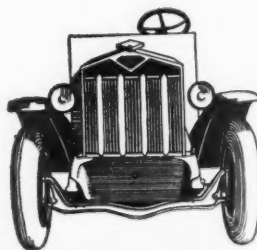
A development of 23 1/2 years.

Member of Motor Truck Industries, Inc., of America

CLYDESDALE

**This ONE Line
COMPLETELY
covers the
entire truck field!**

1 to 7 Ton



How many more sales could you make if you had a model to meet the requirements of *every* prospect on your list? **THAT'S WHAT CLYDESDALE OFFERS!** A range of models from 1 to 7 tons, backed by an *established* manufacturer and a reputation for long, uninterrupted service.

Moreover, it means only ONE name to link with yours—ONE line of replacement parts to stock—ONE line to service—ONE set of books.

The Clydesdale proposition is worth investigating. Write!

CLYDESDALE COMPANY

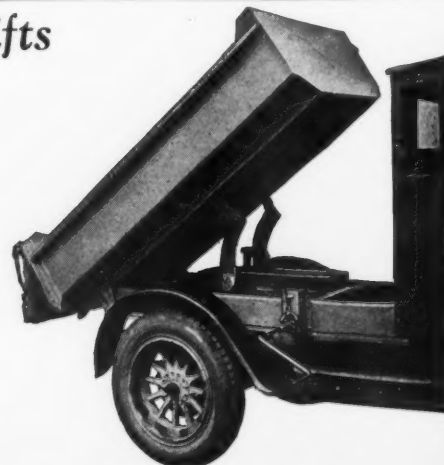
CLYDE, OHIO, U. S. A.

**This 1 1/2 to 2 Ton Dump Body Easily Lifts
Any Load in 30 Seconds!**

The Marion Hand Operated Body and Hoist fits practically all 1 1/2 to 2 ton trucks. Easily operated, exceptionally fast dumpers. No part of hoist extends below chassis frame—all gears enclosed against dirt, etc. High dumping clearance and angle. Pressed steel frame. Body of 10 gauge steel plates reinforced and braced on bottom. Double action tail-gate. Write for complete information including dealer discounts.

THE MARION STEEL BODY CO., MARION, OHIO.

Marion Steel Dump Bodies





TRUCKS OF CHARACTER

A liberal selling plan for permanent dealer connections. Write today for details.



**GRAMM-BERNSTEIN
CORPORATION**

LIMA

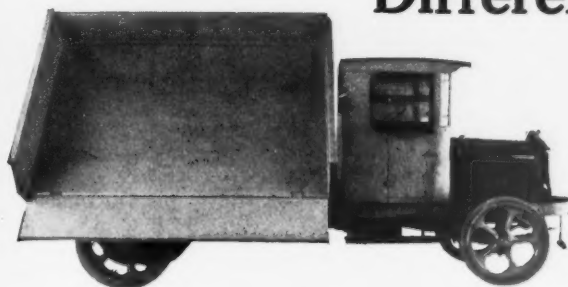
OHIO

**Embodying an experience of more than a quarter of a century in
building good Motor Trucks Exclusively**

Differential Body 3-Way Dump

(Patented)

DUMPS—RIGHT—LEFT—REAR



NOTICE the clear wide opening—nothing
to obstruct the flow of the load

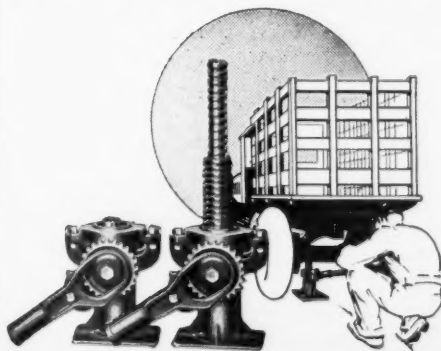
DOWN FOLDING side doors operate automatically and
place the load clear of the truck wheels—no latches used—
high dumping angle.

MECHANICAL screw hoist completely enclosed and
trouble-proof.

THE DIFFERENTIAL BODY is made in sizes suitable
for application to all standard trucks of 2 tons capacity
and larger.

THE DIFFERENTIAL STEEL CAR CO.
Findlay, Ohio

HEAVY TRUCKS With Pneumatic Tires Take No. 12 Double Lift



There is a sturdy RELIABLE JACK for
every type of car, bus and truck.

For heavy trucks with pneumatic tires, have
a No. 12 Double Lift handy. Slides under
low axles with ease, yet lifts 10 inches to
give ample clearance for tire changing.

The double-acting screws work together
and assure speed. Operates easily. Any

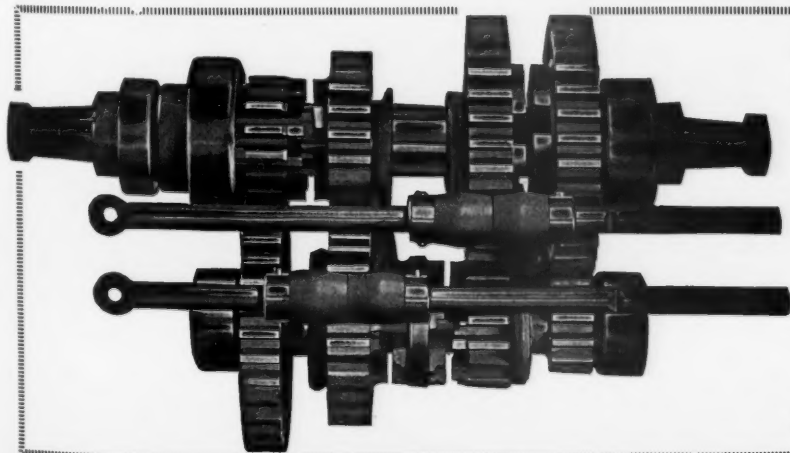
length of handle can be inserted in jack,
depending upon height of truck body.

Specifications No. 12. Weight, 17
lbs. Lift, 5 tons. Height of jack,
8" to 18". Screw Diam.: Outer,
1 1/4"; Inner, 1 1/4".

Write us for prices and additional informa-
tion. Whatever your need, we have a
jack to meet it.

ELITE MANUFACTURING CO., ASHLAND, OHIO

RELIABLE JACKS



COTTA GEAR CO.

INDIVIDUAL CLUTCH TRANSMISSIONS

FOR

3 1/2, 5 and 7 Ton Trucks

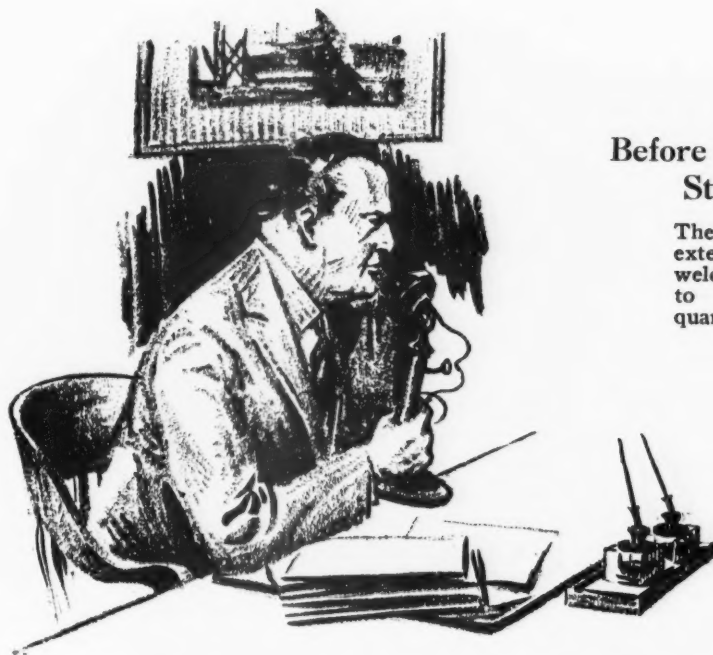
Notice the short, compact and husky
construction.

Long bearings in the loose gears.

COTTA GEAR CO., Rockford, Ill.

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Before You Leave the Show
Stop at Booth 484

The Fuller & Sons booth
extends to you a cordial
welcome, and invites you
to make it your head-
quarters at the show.

You can telephone
for

FULLER TRANSMISSIONS

—and have your order filled

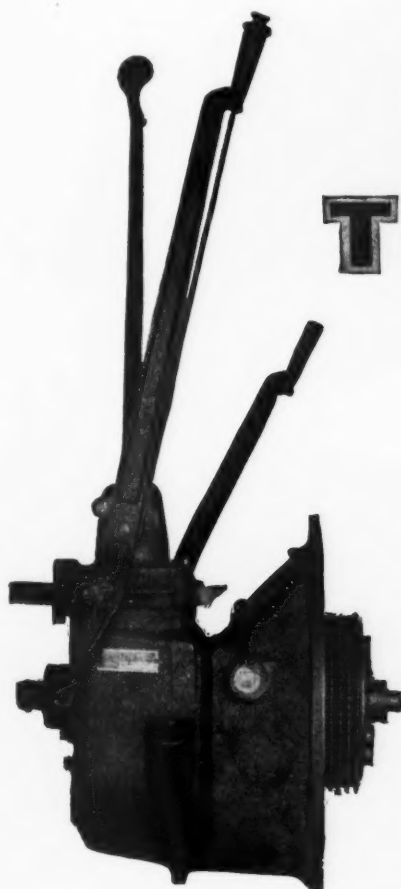
It is a great convenience when you need Fuller Transmissions or parts, to know that you can telephone, wire or write for them and have delivery under way within 24 hours after your message is received.

This is only one of the advantages of Fuller service. Standardization, high quality and lower costs are others that establish Fuller preference among users.

Our engineers will
gladly go any-
where for confer-
ence when trans-
missions are being
considered.



Records of Fuller
accomplishments
are always avail-
able for the con-
sideration of man-
ufacturers, dealers
and owners.



Fuller & Sons Manufacturing Company

Kalamazoo

Members of Motor Truck Industries

Michigan

TRANSMISSION BUILDERS FOR 25 YEARS